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ABSTRACT

This experiment continues the GUME experiments investigating methods for teaching English to Swedish school pupils. The aims of this particular study are twofold: (1) to analyze and classify the errors made by Swedish pupils in an oral English test in an effort to establish error patterns; and (2) to describe how the twelve most frequent errors in a systematic classification of errors are used to form the basis of an acceptability and an intelligibility test, which is subsequently submitted to native Englishmen. Such an experiment raises the possibility that the objectives of intelligibility and communicative comprehension may be more important than grammatical correctness. Included here are reports on the oral tests administered to Swedish students, the analysis of error patterns, the intelligibility experiment with English informants, conclusions, and discussion of implications. Appendixes provide additional details. (VM)

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The GUME Project

Margareta Olsson

INTELLIGIBILITY

A Study of Errors and Their Importance

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INTELLIGIBILITY

A Study of Errors and Their Importance

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May, 1972

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Gothenburg in May, 1972
Margareta Olsson

NOTE

This study discusses the results of two different kinds of tests. In order to distinguish between them, there are two different designations. If reference is made to the oral proficiency test administered in form 8 to Swedish pupils, the expression "oral criterion" will be used. Its written counterpart in the GUME 5 test battery will be called the "written criterion". The pupils who took part will be called the "testees" or quite simply the "pupils".

The word "test" will be reserved almost exclusively for the different types of acceptability and intelligibility tests discussed. The native Englishmen on whom the acceptability and intelligibility of the testees' responses were tried out, will be called "informants".

In the systematic classification of errors the words "class" and "sub-class" will be used. The word "category" will be retained for the 12 categories of deviances which were found to be the most frequent in the error classification.

In this study "syntax" stands for both syntax and morphology. In other works discussed here, the respective author's grammatical terminology will be used.

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INTRODUCTION

GUME Activities

The GUME project (Göteborg, UndervisningsMetod i Engelska = Gothenburg/Teaching/Methods/English) started in 1968 with the aid of grants from the National Board of Education, Bureau L4.

The project is an interdisciplinary undertaking. Research consultants have been Professor Alvar Ellegård, head of the English Department of the University of Gothenburg and Professor Karl-Gustaf Stukåt, head of the Educational Research Department of the School of Education, Gothenburg.

The principal object of the GUME-project was to compare and evaluate three different methods of teaching English to Swedish school pupils - by giving them no explanations of grammatical structure (the Implicit method, Im), by giving explanations in English (the English-Explicit method, Ee) or in Swedish (the Swedish-Explicit method, Es). Equal time was devoted to each method so that the pupils taught by the Im-method had more practice than those taught by either of the other methods.

The reason why the project was initiated was that with the works of Noam Chomsky (1959, 1965, 1966) renewed attention was directed to theories on language acquisition emphasizing mental processes and hypothesizing an innate language-acquisition device (1965, p. 53). Opposed to these concepts are the ideas of the empiricists (e.g. Hull, 1953, Skinner, 1957), which Chomsky comments upon as follows: "The notion that linguistic behavior consists of 'responses' to 'stimuli' is as much a myth as the idea that it is a matter of habit and generalization". To Chomsky, linguistic behaviour is rule-governed, and also "stimulus-free, and innovative" (1966, p. 46). At issue there are thus two theories, one considering the mentalistic processes in learning and the second, the mechanistic processes (Chastain, 1969, p. 105). The instructional methods used in the GUME experiment set out to probe the tenability of these two theories in experimental field work in Swedish classrooms.

The first three experiments were with pupils from the 7th form, aged about 14, who received instruction on grammatical structures that differ between English and Swedish. GUME 1 dealt with the do-construction. GUME 2, some and any, and GUME 3, the passive voice. The experimental instruction lasted for six lessons. The pupils had the same test battery in each separate study both as pre- and post-test. They were also given IQ-tests and attitude tests.

The findings of the three experiments showed that the three methods gave results that did not differ discernibly from one another.

The next two experiments, GUME 4 and GUME 5, were with the 6th and the 8th forms respectively. GUME 4 dealt with several grammatical structures, while GUME 5, of which the present study is a continuation, took the same structure as GUME 3, that is, the passive voice. GUME 4 used twice as many lessons as the preceding experiments, but for GUME 5 the experimental instruction was limited to six lessons, on account of the time needed for the pupils' practical vocational guidance, and the standardized national tests given in form 8 in Sweden in Swedish, English, and mathematics.

The outcome of both experiments was substantially the same as that of GUME 1, 2, and 3; i.e. the three methods did not give significantly different results. All five experiments have now been reported on in bulletins of the Gothenburg School of Education, Department of Educational Research (see bibliography, GUME reports). The GUME Adults Project is concerned with the teaching of adult students. In this experiment significant differences in teaching effect, which favoured the Explicit Swedish method, were found to exist.

Objectives of the Present Study

The present study starts with an account of an oral test given to 12 classes of the experimental population of GUME 5.

The greater part of the study deals first with an analysis of errors in the oral test. It then describes how the twelve most frequent errors in a systematic classification of errors were used to form the basis of an acceptability and an intelligibility test, which were subsequently submitted to native Englishmen.

The analysis of errors establishes types and frequencies of errors committed by the pupils in the easier course of English instruction

and the pupils in the more difficult course. The study also discusses the cause of the more frequent, that is, the systematically recurrent errors.

The oral test deals, as did the test battery administered in the GUME 5 experiment, with the passive voice only. The linguistic material on which the error analysis is based is, consequently, fairly limited. On the other hand, the subject-matter of the analysis, the verb, is of major importance, and the study sets out to scrutinize differences in the treatment of regular and irregular verbs.

The second major aim of the study is to answer the question to what degree the deviant sentences formed by the pupils during the administration of the oral test are acceptable and/or understandable to native Englishmen. The classification of errors ranks the deviant sentences hierarchically from slight to most serious deviances. The hypothesis is that there should be a positive correlation between the native person's willingness to accept and ability to understand and the degree of ungrammaticality of the sentence in question.

Rationale of an Intelligibility Investigation

English is a compulsory subject in the Swedish comprehensive school. Instruction starts in the third form (9 year-old pupils) and continues up to the ninth form (16 year-old pupils). Up to and including the sixth form, the pupils follow the same syllabus. In form 7, instruction branches off into two courses: an easier course (allmän kurs, Ak) and a more difficult one (särskild kurs, Sk).

The teaching of foreign languages in the comprehensive school is based on the premise that language is primarily a means of oral communication between human beings (Läroplan för grundskolan = The Authorized Curriculum for Schools/, 1969, p. 142). The essential skills at this stage are to understand and speak the language (Supplement II, p 44). In the easier course, Ak, the teacher is recommended to make only moderate demands on the pupils as regards grammatical correctness (Läroplan, p 145).

The level of attainment in English can be very different in the two courses. It is officially acknowledged that in not a few cases the pupils' ability to learn languages may be very limited. It is

stressed, however, that even quite limited linguistic skills and a very general picture of the civilization and culture of a foreign nation can be of great value to the individual (p 143).

In both courses, the pupils can produce grammatically correct sentences and also utterances which are apparently fully comprehensible to native Englishmen, but, nevertheless, seriously deviant. If the communicative aspect of language studies is to be as heavily stressed as it is in the Authorized Curriculum, it could in instructional and evaluation situations be questioned whether the norm should not be intelligibility rather than grammatical correctness,in as much as the structure of a language is less significant than its vocabulary in the communication situation. This would apply for some categories of pupils, at least. The yardstick of comprehensibility, however, must be the reaction of native Englishmen. In order to obtain such reactions, this study investigates frequencies and types of errors, albeit in a very limited material, and on the basis of these findings, attempts to establish, in an intelligibility test, how well native speakers understand the pupils' deviant utterances.

The audiolingual or "scientific approach" stressed the mastering of grammatical structures at the cost of extending the vocabulary (Fries, 1946, p 3 and Lado, 1964, p 52). Attention is today shifting from control of structure and focuses, as does the present intelligibility test, on the question of success in communication. The change in attitude is noticeable in e.g. P. Smith, Toward a Practical Theory of Second Language Instruction (1971): "The formerly felt pre-eminence of structure and learner analogy led naturally to a concentration of few vocabulary items in tightly controlled pattern drills.... Functional communicative control of language is more important to a learner than over-emphasis on phonology, on grammatical correctness.... Indeed, the concept of mastery before progression is not valid. The English-speaking child is certainly not kept from throw until he has overcome his /ɵ/ vs. /f/ confusion in three. Nor does he not hear the passive voice until a prescribed level of maturity. The same is true of the reasoning second-language learner who can be so frustrated by being keptat a point until it is mastered that he abandons the task" (pp 41-2).

There are more facets to the question of exaggerating the importance of grammatical correctness than the possible motivational effect on the learner. Different learners have different needs. Feasible approaches in the planning of language courses for special purposes and with a highly controlled linguistic content are discussed by J.L.M. Trim in "Linguistic Considerations in Planning Courses and in the Preparation of Teaching Materials" (1969): "These... possibilities raise a far more controversial question - whether it may, under severe conditions of restrictions, be admissible to present features of linguistic organization so incomplete (in extreme cases only a limited lexicon) that the learner cannot produce well-formed sentences at all... So far as I know, no course at present deliberately sets out to communicate so restricted a competence. It is always presupposed that correctness or grammaticality is, in principle, inviolable. For some classes of learners that universal assumption might be challenged" (p 21).

H.V. George (1971) has enlarged upon these apparent heresies: "Many teachers believe that we should aim for native speaker's written and spoken English even if we do not expect to achieve it, for without native speaker's English as a model, it is said, international intelligibility will not be possible. However, improvement in understanding may be made from the listening side as well as from the speaking side - and perhaps it may be made more economically from the listening side..." (p 272).

Thus a more nuanced evaluation of the learner's performance is linked to a reconsideration of the content of the instructional course. Heavy but constructive criticism on the design and content of language courses is delivered by Francis C. Johnson (1969) in "The Failure of the Discipline of Linguistics in Language Teaching". In Johnson's opinion the misguided belief that linguistic research can provide an adequate base for the instruction of foreign languages has led to teaching materials being selected more with a view to acquiring language content than language skills. The attention paid to current linguistic trends has meant that learning theory has been neglected.

According to Johnson, the guiding principles when choosing linguistic data for a course should be to what extent they facilitate communication. To include items of the language which most learners can master

only imperfectly after several years of study, leads to a waste of previous time and to frustrated learners (p 235-244).

The question of correctness and intelligibility has also been followed up in the testing situation. Of immediate interest to this study is the viewpoint of Peter Robinson (1971) on oral expression tests: "There are no widely accepted linguistic criteria of grammatical, lexical, and phonetic correction, but there are two eminently practical criteria, which should underlie any evaluation, namely, comprehensibility and acceptability. Does the subjects' error or deviation from the implicit and explicit norms of speech of a community make him difficult to understand? And if not, is that error or deviation acceptable to that community?" (p 261).

An utterance is acceptable in Chomsky's opinion (1965) if it is "perfectly natural and immediately comprehensible without paper-and--pencil analysis, and in no way bizarre or outlandish". He considers, however, that there are degrees of acceptability as there are degrees of what is grammatical, but the scales do not coincide. To use one of his examples, the sentence "The man who the boy who the students recognized pointed out is a friend of mine" is highly grammatical, but because of its clumsiness, very low in an acceptability ranking (pp 10-11). If examinees produce utterances which are deviant, but, nevertheless, acceptable to native speakers, Robinson's views could entail that the evaluation principles should not be the same as when the students produce deviant utterances which are unacceptable to native speakers. Even if in both cases the sentences are fully comprehensible to native speakers, this is a possibility well worth consideration.

The procedure for testing communicative ability can be very simple, as recent experiments have shown (Upshur, 1971). In these, the evaluation is concerned solely with comprehensibility. During the examination the examinee has in front of him a series of pictures. If he can make the examiner understand which picture he is talking about, he scores a point. No account is taken of faulty pronunciation and intonation or of grammatical mistakes. The scoring is objective and not very time-consuming (pp 435-441). This method of establishing whether communication has taken place is easily practicable and deserves great attention.

There is thus, at present, no lack of suggestions for new contents in courses of language instruction or of new principles for evaluating the result of the teaching. Both are characterized by the fact that it is intelligibility, i.e. successful communication, that is emphasized rather than the concepts of "correctness".

On the Concept of Error

An error is here to start with defined as a deviance from the use of English as described in four English school grammars used in forms 7-9 of the comprehensive school in Gothenburg: Hammarberg-Zetterström-Karlsson: Lilla engelska skolgrammatiken (1962, 64, 65), Karlsson-Lungqvist: A Short English Grammar (1969), Löfgren-Hedström: Engelsk språklära (1969) and Slettengren-Widén: A Modern English Grammar, Shorter Edition (1966).

There are, however, degrees of deviance or ungrammaticality, and a system for describing these is necessary for the purpose of this study.

In Aspects of the Theory of Syntax (1965, pp 148-153) Chomsky states that a descriptively adequate grammar of a language should in an explicit and well-defined way assign structural descriptions to well-formed sentences of that language as well as to sentences that deviate from "well-formedness" in one way or another. The grammar should, consequently, make a distinction between a well-formed sentence, such as (examples taken from Chomsky) "John plays golf" and the deviant sentence "Golf plays John". It should also differentiate between "degrees of deviance", exemplified in the sentences "John found sad" and "Golf plays John". In the former case a rule is broken which subcategorizes verbs into transitives, intransitives, pre-adjectival, pre-sentence, etc. In the latter case, rules are violated which define a selectional relation between two positions in a sentence, for example, the position of the verb and that of the immediately preceding or following noun.

On the basis of the notion that the deviance is greater the higher in the dominance hierarchy the linguistic item is where violations of the rules occur, Chomsky suggests a scale of deviance divided, tentatively, into the three main divisions below:

(i) sincerity may virtue the boy
(ii) sincerity may elapse the boy
(iii) sincerity may admire the boy

The deviance is greatest if the rules of lexical categories are violated, which in sentence (i) is illustrated by a noun being substituted for the verb. The result would be less deviant, if, as in sentence (ii) a verb that is, however, intransitive, is substituted for the verb, and thirdly, the least deviant, if the verb, as in sentence (iii), is transitive, but does not take an abstract subject.

Chomsky does not consider that the notion of "grammaticalness" can be related to "interpretability" which should be understood as "ease, uniqueness,or uniformity of interpretation" (p 151). Examples of this lack of relationship are found in the sentence "The book who you read was a best seller", which in Chomsky's opinion is more seriously ungrammatical than the utterance "misery loves company", but on the other hand, easily and uniquely interpretable. This is not the case with the latter sentence, as some metaphorical interpretation must be assigned to it in analogy with well-formed sentences which adhere to the selectional rules in question. As the present study sets out to establish relationships between deviances from correct use and comprehensibility, models other than that described in Chomsky's scale of deviance must be found.

A grammatical sentence can be defined as "a string of words that adhere completely to the syntactic and semantic rules of a language" (Marks, 1967, p 196). An aspect of the grammaticality of a sentence is whether the sentence is congruous in a specific linguistic surrounding. If the question "Will you have dinner at eight?" is posed and answered by the sentence "Light travels faster than sound", this utterance is not in accordance with the semantic conventions of the English language. A violation of a purely syntactic rule as in the sentence "Goodness my, the can girl die" would not lead to failure in communication to the same degree. As there is here a noticeable relationship between different kinds of deviances and degrees of intelligibility, a tentative ranking of the deviances from the least serious to the most serious seen from a communicative point of view could be as follows. (An example is given after each type):

1. One syntactic deviance
   "He were bitten by the angry dog"

2. Two syntactic deviances
   "He been catch by the policeman"

3. One word in the sentence lexically incorrect
   "He was beaten by the angry dog" instead of "He was bitten by the angry dog"

4. A semantically deviant sentence
   "The man is meeting his sweetheart" when "The man was met by his sweetheart" was the expected answer

5. A semantically and syntactically deviant sentence
   "The money hide under the bed" instead of "The money was hidden under the bed"

Within No. 1 the function word (here an auxiliary) as well as the content word (here a main verb) can be deviant. The hypothesis is that if the syntactic deviance occurs in the function word, communication is blocked to a lesser degree than if the syntactic deviance is found in the content word, that is, the sentence "He were bitten by the angry dog" is assumed to be more easily interpretable than "He was bite by the angry dog".

The errors found in the error analysis performed in this study will be ranked according to the above principles. The underlying hypothesis that degrees of comprehensibility are mirrored in the degree of deviance of the pupils' sentences, will be tested in an intelligibility test.

THE ORAL CRITERION

When GUME 5 was planned, it was decided that an oral test should form part of the test battery. The original intention was to use the oral criterion both as a pre-test and post-test in all the 24 classes which had taken part in GUME 5. Financial restrictions as well as limitations in time nullified these plans. It was only possible to use the oral criterion as a post-test in 12 classes, representing eight schools. Six of the classes were from Ak and six from Sk. The six classes from each course consisted of two Im-classes, two Ee-classes, and two Es-classes. A total of 247 pupils took part.

Like the progress criterion in GUME 5, the oral criterion was to concentrate on the passive voice. No assessment of pronunciation or intonation would take place. What this particular test aimed at was thus an evaluation of fluency, i.e., the testees' ability to formulate a sentence within a limited space of time.

There was a lengthy discussion as to whether one of the written sub-tests should be given orally without any changes. This would, of course, give rise to interesting comparisons between the results of these two criteria. On the other hand, it would be impossible to know if success in the oral criterion was due to practice which had taken place in the preceding written criterion. With this in mind, it was decided to devise a special oral criterion test.

There are no standardized oral tests in English in existence constructed for Swedish schools and, furthermore, the absence of language laboratories in the Gothenburg schools taking part in the project made it very improbable that the experimental population had any previous experience of oral testing. As a new testing technique can in effect have a disturbing influence on the testee, it was considered wise to model the oral criterion on one of the written sections in the criterion test which the pupils had done both as pre-test and post-test, in order to neutralize the novelty of an oral examination.

Consequently, the oral criterion took the form of a dialogue consisting of questions and guided answers. The only thing the pupil

had to fill in were the two verbs which formed the verbal part of the sentence. There was one practice sentence, and nine test items in the criterion proper. For each item there was a picture illustrating a situation and under it the question: "What happened to..."

The artificiality of the testing situation in modern languages has been much criticized. Dialogues, interviews, etc., have been introduced in order to imitate realistic linguistic situations. It is regrettable that in a spoken test these commendable steps are inhibited by the use of headphones, microphones, tape-recorders etc., which are anything but natural in a communicative situation.

As the pupil was unused to a microphone and furthermore might be anxious in the test situation, he was told to say his name, class, and the name of his school into the microphone to break the initial ice. Later he was made to repeat the practice sentence. All the instructions were in Swedish.

The oral criterion had been constructed by the present writer. It takes five minutes. Three of the nine verbs are regular (cover, invite, wash) but with phonetically different past participle endings. The remaining six verbs are irregular of varying frequency, but all of them are to be found under form seven or even form six in the frequency word list for Swedish schools by Birger Thorén.

The Pilot Study

One of the schools which participated in the GUME experiment, Centralskolan at Stenungsund, had a language laboratory. As a tryout the oral criterion was administered there before and after the experimental instruction in an Ak-class consisting of 10 pupils. Of these ten, nine took the pre-test and eight the post-test. No assessment of individual progress was made, but the pre-test was scrutinized to see which errors were the most frequent and in which of the nine test items they occurred.

Preliminary Classification of Errors. As the oral criterion consists of nine sentences and there were nine pupils who did the pre-test, the basis for a preliminary classification of errors is 81 sentences. Of these 81, only ten were correct. Correct answers were found in items 1, 5, and 8 which were to elicit responses containing regular verbs.

The remaining sentences, which contain irregular verbs, do not display a single correct version. Among the mistakes, the regular formations of an irregular past participle had the highest frequency.

A first classification of the errors divides them into two groups: 1) constructions with an auxiliary and a main verb 2) constructions with a main verb solely. The latter group is represented by eight of the 71 incorrect sentences. However, it was only one pupil who consistently made this error. That the auxiliary was added in most cases may be due to the instructions being given at the beginning of the test, and also to the fact that two dashes in the pupil's papers indicated that two words had been left out. The remaining 63 deviant sentences, belonging to group 1), fall under the three following headings:

	Frequency of occurrence
A. Incorrect form of auxiliary + correct main verb	3
B. Correct form of auxiliary + incorrect form of the main verb	44
C. Incorrect form of the auxiliary + incorrect form of the main verb	16
	63

The correct form for the auxiliary in all the test sentences should be "was", and the pupils had heard this form from the tape in the practice sentence. It is, under the circumstances, surprising that 19 of the 63 sentences contain forms with incorrect tense, incorrect number, or both, of "be". That the main verb was the great stumbling-block is not a surprise, however. Erroneous responses include very disparate versions, for instance, use of the uninflected infinitive, regular inflection of the irregular verbs, a present participle instead of the past participle. These errors mirror very different stages of proficiency in the English language, and will be duly considered in the classification of errors to come.

The Experiment Proper

Technical Arrangements. The oral criterion was administered individually to 247 pupils from 12 classes, representing eight schools.

This took much longer to do, of course, than it would have done if a language laboratory had been used. However, the advantage of individual testing in this case was that calm, personal treatment from a grown-up he was alone with enabled the pupil to relax more than he would have done when sitting in a booth surrounded by unfamiliar instruments.

The Pupil Attitude Test, which was distributed after the end of the GUME 5 experiment but before the oral criterion, shows that many pupils were not too favourably disposed towards tne project (pp 105-6). It had been postulated that the particular age-group chosen for GUME 5 would entail difficulties of this kind (p 42). With this in mind it was an agreeable surprise to find how willingly the pupils cooperated in the oral criterion.

The testing in the schools was led by the same assistant except for two classes where I took over. The technical equipment consisted of the headphone used by the pupil which was connected to two tape-recorders. The pupils listened to a cartridge cassette from one recorder and recorded their responses on the second.

Transcribing the Test. The problem of marking an oral test is to decide whether the responses should be transcribed and then marked, or if they should be marked as they are heard on the tape. In most cases, both approaches necessitate repeated listening to each sentence, but it would have been extremely difficult for the examiner, considering the quality of the recordings in question, to try to pick out the critical item in a sentence and, at the same time, make an evaluation of it. As the oral criterion had not been created solely as a means of assessing oral proficiency, but was also to serve as a basis for an error analysis, it was decided to have all the test responses transcribed to facilitate not only precise and reliable marking but also subsequent work.

Transcription of the responses in the oral criterion was carried out by a student of English at the University of Göteborg. To check the reliability of the result, two boys and two girls chosen at random from each class were listened to once more and their responses transcribed by another student. The inter-listener reliability was as high as can reasonably be desired. Thus for 432 repeated estimates, opinions differed as to what the pupil said on only four occasions.

Principles Used for the Marking. A subject's score on the oral criterion is the number of right answers. Only the verbal part, that is, the auxiliary and the main verb were marked. Mispronunciations were treated generously. [kɔ:tʃ] for "caught" was not marked as an error, for example. For the regular verbs the principle was that if a dental suffix was added, this was satisfactory. Thus ['ku:vəred] instead of "covered" was considered correct. An approved form of the auxiliary plus an approved form of the main verb was assigned one point. As the marking was not wholly objective, the test was marked twice and interscorer reliability calculated. It was found to be .93 for Sk and .85 for Ak, and for the two courses together .95 (Product-moment correlations, Ferguson, 1966, p 109).

Evaluation of the Test. Of the original 247 pupils who took the oral criterion seven results were excluded because of technical mishaps. (Either the pupil could not hear the stimulus sentence or his answer was not properly recorded.) Means and standard deviations were calculated for 79 Ak-pupils and 121 Sk-pupils for whom school grades and results for the written and oral criteria were available. They are found in Table 1:

Table 1: Means and Standard Deviations of the Oral Criterion

Course	N	$\bar{x}$	s
Ak	79	1.57	1.62
Sk	121	6.28	2.66

The oral criterion demonstrates great difference between the two courses. Among the 12 classes the mean varies from 7.22 to 4.50 in Sk and from 2.64 to 0.78 in Ak.

As test No 5 (the written counterpart of the oral criterion) consisted of 14 items and the oral criterion of only 9, a comparison between them must be made in percentages. (The marking principles were the same.) The results for the written criterion are from the post-test occasion.

Table 2: Correct Solutions in per cent in the Written and Oral Tests

Course	N	Percentage mean Written test	s	Percentage mean Oral test	s
Ak	79	17.2	12.8	17.4	18.0
Sk	121	62.5	23.7	69.8	29.6

The figures in Table 2 also discriminate clearly between the two courses. It had been expected that there would be greater success in the written than in the oral criterion. In the written criterion the pupils had a chance to go back and correct what they had already done, but in the oral they had no chance to re-wind the tape and make a new recording. Furthermore, they had ten minutes at their disposal in the written criterion and five in the oral. In addition, the result of the oral criterion is compared to that of the written counterpart, when the latter was administered to the pupils for the second time. The very similar results within the courses are, therefore, a surprise.

Reliability

The reliability of a test where all the items are marked as right or wrong depends on the number of items, the standard deviation, and the mean. The reliability coefficients were .56 for Ak and .80 for Sk (The Kuder-Richardson Formula 21, Thorndike-Hagen, p 185). In Ak, the mean of 1.57 (Table 1) indicates that not a few pupils scored no points at all. The figure for the standard deviation shows that the distribution of scores in Ak is positively skewed. Here is the explanation of the low reliability in Ak.

The reliability of the test is in Sk more than sufficient and in Ak just accpetable to enable comparisons between groups.

Validity

To establish the validity of the oral criterion, correlations were calculated between Grades English, the written, and the oral criteria. The results is shown in Table 3.

Table 3: Correlations (Grades English, Oral and Written Criterion)

Ak		Grades	Oral
N = 79	Written	.30	.19
	Grades		
Sk		Grades	Oral
N = 121	Written	.55	.52
	Grades		.52

The degree of validity of the written criterion is established in that its correlation coefficient with the total test battery in Sk was .79 and for the Standardized National tests in English .65 (GUME 5, p 100 and Appendix F). The latter figure testifies to its empirical validity.

The correlations in Table 3 are not overwhelmingly high in Sk between the oral and the written criteria, but as the oral criterion consists of only 9 items, this could be expected. The written and the oral criteria both correlate to the same degree with grades, which might imply that the underlying competence is the same for the two different criteria.

In Ak the picture is identical in that there are no significant differences between the correlation coefficients, but different in that the figures are so low; a characteristic trait of Ak-groups noted in GUME 5. As an example, it can be mentioned that the correlations between the written criterion and Grades English were .32 in Ak and .62 in Sk in that experiment (p 100-101).

The correlations in Table 3 for Sk justify the assertion that the oral criterion measured what it set out to measure. In Ak on the other hand, the oral criterion provided no means of discrimination. It was simply too difficult, and, thus, of low validity.

Method Differences in the Oral Criterion. The GUME studies were designed to assess the teaching effect of three different techniques. It is no concern of the present study to discuss method differences in the result of the oral criterion. Suffice it to say that analyses of variance and covariance failed to establish any significant differences between the three methods used.

Conclusion

In this chapter the oral criterion has been shown to discriminate clearly between the two courses of English study. For Ak it was too difficult, but in Sk it proved to be a useful measuring instrument of satisfactory reliability and validity. As a basis for an error analysis it seems to supply interesting material.

THE ERROR ANALYSIS

General

Tne kind of test an error analysis is based upon may influence the frequency of errors as well as the types of errors. This is immediately evident in the result of the PAKS (Projekt für Angewandte Kontrastive Sprachwissenschaft = Project on Applied Contrastive Linguistics) Arbeitsbericht Nr. 5 (1970, p 38) where an analysis of 4,000 errors made by secondary school pupils in Germany in tests of English proficiency resulted in the following figures:

	N	Syntax/Morphology	Vocabulary	Spelling
Reproduction	300	50 %	30 %	20 %
Dictation	300	1 %	4 %	95 %
Translation	200	15 %	75 %	10 %

In a reproduction test the examinees hear the words and thus the lexis may not be a primary source of error. This is not the case in a translation test, where the examinees are, probably, more concerned with the structure of the language. In a dictation test, vocabulary and structure may be expected to cause the examinees very few difficulties, whereas spelling will be the chief source of error. There are also other reasons for differences in result. In a dictation test as in a translation test, all the participants are being exposed to the same difficulties. This is not the case to the same degree in the reproduction test, where the examinees can choose how to express themselves. This will mean, first of all, a greater variety of expression, and secondly, an avoidance of difficulties.

The oral criterion on which the present analysis of errors is based contains only nine items. In each of these items only two words are considered in the analysis, i.e., the auxiliary "be" and the past participle of the main verb. Reactions from 240 pupils are, however, available for each of these 18 items. As the pupils were offered all the main verbs in the uninflected form on their test papers, lexis does not enter as a probable source of error.

Theories on the Genesis of Errors

According to Nelson Brooks (1964) errors in language learning are something which, like sin, ought to be avoided, but which, nevertheless, must be reckoned with. He states four likely reasons for the occurrence of errors (p 58):

a) the student may make a random response, that is, he may simply not know which of many responses is the right one
b) the student may have encountered the model but not have practised it a sufficient number of times
c) distortion may have been induced by dissimilar patterns in English
d) the student may have made a response that follows a sound general rule but, because of an anomaly in the new language, is incorrect in the new language.

There are other reasons why the student commits errors when learning a foreign language. The list includes the wandering of attention, laziness, incapacity, and a lack of interest. Errors may also be caused by the personal failure of the teacher and/or by the failure of the method he is using.

Errors under c) have been given particular attention by the contrastive analysts. Contrastive analysis is a branch of linguistics which tries to describe differences and similarities between languages with the aim of rationalizing foreign language teaching. It holds the view that differences between a learner's source and target languages will lead to interference consisting of transfers of first language patterns into the second language. Contrastive analysis professes to be able to predict errors due to interference between the languages as expressed by Weinreich (1965), "If the phonic or grammatical systems of two languages are compared and their differences delineated, one ordinarily has a list of the potential forms of interference in the given contact situation" (p 3). Linguists, however, differ considerably in their interpretation of the nature and value of contrastive analysis (cf. e.g. Wardhaugh's discussion of the "strong" and the "weak" version of contrastive analysis, 1971, pp 123-130). There are, for example, divergent opinions on the interrelationship of prediction of errors and error analysis, that is, whether error prediction makes error analysis superfluous, or

whether the two complement each other. Clearly, the latter would be correct, as errors caused by, for instance, momentary lapses of memory cannot be predicted, while, on the other hand, error analysis is an a posteriori fact, which only the future learner can profit by. When, in The Contrastive Analysis Hypothesis: What It Is, and What It Isn't (1970), Henry Lee Gradman carefully scrutinizes the contrastive analysis theory, he comes to the conclusion, however, that it is only a subcomponent of error analysis (p 139).

The problem of errors in foreign language learning was approached by Jack Richards "a posteriori" (1971, pp 204-219). He carefully examined errors listed in, for example, Dušková,"On the Sources of Errors in Foreign Language Learning" (1969) and F.G. French,"Common Errors in English" (1949). A great number of errors were found to be common to learners with sharply divergent linguistic backgrounds. This does not support the concept that differences between the source and the target language are the chief reason for interference, since according to this concept, different mother tongues would have resulted in different kinds of errors. Richards divided the intrastructural errors he found into four big classes (p 214):

1. Over-generalization
2. Ignorance of rule restrictions
3. Incomplete application of rules
4. False concepts hypothesized

The role of hypotheses in the language acquisition process has been discussed by Chomsky (1959), who comments on the capacity of the child learning its first language to "generalize, hypothesize, and 'process information'" on the basis of raw data in a very complicated way (p 43). When learning a second language the procedure may be something similar. Thus rather than consider errors as items to be avoided, we may look upon them as a necessary ingredient in second language learning. The implication is that the learner progresses while testing and remodelling his hypotheses about the linguistic materials he is handling.

Review of Related Work

Dušková. Dušková in "On the Sources of Errors in Foreign Language Learning" (1969, pp 11-30) describes the errors in English of 50 Czech

postgraduate scientific students. They wrote three short compositions, using each of them on an average 170 words. There were 1,007 errors, which were classified under grammar and lexis. The grammatical errors were further sub-divided into morphology, modal verbs, tenses, articles, word order, syntax, construction and government, and prepositions. The wrong use of articles was the most frequent error (260 instances).

It is evident that this classification of the grammatical errors was created because certain deviances are particularly interesting when the learners are Czech, but the system above does not facilitate a survey of the relationship of the three main classes, lexis (233 errors), morphology (180 errors), and syntax (69 errors). Word order, for instance, is usually combined with syntax, but here it has a class of its own. So have prepositions, but they can belong to syntax as well as to lexis. In the expression "The discovery of America", "of" is a syntactic feature, while in the sentence "He was sitting on the table, not under it", the nature of the prepositions is semantic.

Dušková scrutinized the result of her classification of errors to see if it is justifiable to distinguish between mistakes (that is, errors due to lapses of memory, inattentiveness, etc) and regularly recurring errors (cf. Pit Corder, 1967, pp 161-170). Twenty-five per cent of the 1,007 errors could be considered as mistakes, while the remaining seventy-five per cent comprised errors systematically repeated. The error analysis also demonstrated that interference from the mother tongue was traceable, but that other sources of interference were also evident (e.g. the student's study of German). The fact that no articles exist in Czech led both to omissions of articles (interstructural interference) and to the use of the definite article instead of the indefinite (intrastructural interference).

Buteau. With a view to improving foreign language instruction by establishing learners' difficulties, an error analysis was carried out at the St. Joseph Teacher College at Montreal, Québec (Buteau, 1970, pp 133-145). First year college entrants, 124 in number and aged from 16 to 20, took part. All students were Englishspeaking, but in addition to that, some students also spoke French, Italian, and various other languages at home. The basis of the analysis was an oral French grammar test and a short written essay.

In the oral and the written test, 85 per cent of the students committed the same types of errors. As the difficulty of a test item was assumed to be reflected in high or low scores, the responses in the oral test were distributed on four levels of difficulty. The result does not exhibit that sentences of identical construction in English and French are easily learnt. Thus for the verbs, the survey indicates that the correct use of tenses was a more difficult problem than inflection. In the written test, nearly 90 per cent of the students successfully coped with gender agreement, a linguistic problem practically unknown in English. These findings do not support the notions of contrastive analysis. Nor does the fact that, except for the Frenchspeaking students, no significant difference was found to exist in the types of errors which students of varying linguistic background committed.

Grauberg. For the German language an error analysis similar to Dušková's was undertaken at the German Department at Nottingham University (Grauberg, 1971, pp 257-263). Twenty-three first year honours students wrote a 20-minute essay varying in length from 100 to 200 words. In all, 193 errors were catalogued. The classification of them was based partly on the parts of speech and partly on concepts of transformational grammar. Rigid demarcations between lexis and grammar were found to be almost impossible to establish. The three main classes of errors were the lexical (102 instances), the syntactic (70 instances), and the morphological (21 instances). Seven of the 193 errors could be considered as mistakes. Interference from the mother-tongue could be traced in 51 of the lexical errors, but only in 20 of the syntactical. No such errors were discernable in morphology.

Schwartz. A doctoral thesis (B. Schwartz, 1971) presented at the University of Stockholm, classified 2, 384 errors in 200 French translation tests. Of the errors, 1,144 were found to be grammatical and 1,240 lexical. As in earlier studies, it was difficult to draw an exact line between grammar and lexis (p 84). Of the grammatical errors, the largest category was the verb (p 73). Interference from Swedish was found most frequent at the grammatical level (p 80).

Stendahl. An error analysis based on 50 students' oral and written work at the English Department of the University of Gothenburg is now being completed. An interim report has been published in the MUP-series (Mål, Undervisning, Prov = Aims, Teaching, Tests) describing the results of ten students (Stendahl, 1970).

The error analysis involves a first grouping of the errors under lexical and grammatical headings. The main categories "lexis" and "grammar" were subdivided for "lexis" into content and function words, and noun phrase, verbs phrase, and sentence, for "grammar". Within these sub-groups there were further divisions into new categories.

This system of classification is commendable in that it is not too rigid in its application. Thus, if the verb "will" was wrongly used to imply future, it was counted as a grammatical error, but if it seems probable that the student had used "will" to mean "want to" because the Swedish word vill has this meaning, the error was counted as a lexical one. A further advantage of this system is that it allows a survey of how a particular part of speech is represented in, for instance, violations of word-order, lexical choice, form, etc.

In most cases the result of the pilot investigation indicated great similarity in the written and oral work of the individual student, with the exception of verb agreement. It also showed that types and frequencies of errors did not differ greatly in the oral and the written work. Of the 172 lexical errors, 65 were due to interference from the source language.

The UMT-Project. The Swedish UMT-project (Undervisnings-Metod i Tyska = Methods of Teaching German) has up to now reported on three studies on types and frequencies of errors committed by Swedish pupils learning German (Engh, 1968a, 1968b, and Peterssom, 1971). The first two studies are based on the essays of 14 pupils in the first year of the gymnasium (17 year-old pupils) and 63 pupils in the ninth year of the comprehensive school (16 year-old pupils). The third report deals with free oral production by 24 pupils in the ninth form. The pupils in form 9 were doing their third year of German, while the 17 year-olds had studied German for four years.

In all three experiments the errors were catalogued according to the same principles, except that for the oral test the headings "spelling" and "capitals" were excluded. The remaining categories are the parts of speech and a group called "choice of words" which includes formations influenced by Swedish or English usage, erroneously used German constructions, and isolated words incorrectly used. The latter category includes errors of a semantic nature.

As found earlier, it is difficult to establish distinct borderlines when categorizing errors. Here, for instance, the incorrect use of als as a relative pronoun in the sentence "Ich bin bei einer Familie, als ich in Kiruna traf" is placed under the heading "relative pronouns" (1968a and b) but later (Engh, 1971, p 5) it is moved to the category "choice of words". When the possesive pronoun sein is used instead of ihr, however, the mistake is always listed under "possessive pronouns" and not "choice of words", which one would have thought more consistent. Prepositions have a heading of their own, but only in respect of the incorrect case after prepositions, while prepositions as a part of speech are placed under the "choice of words" heading.

Disregarding spelling and capitals, the "choice of words" heading contains the greatest number of errors in all three experiments (Engh, 1968a and b, Petersson,1971), followed by the sum total for the verbs (including tense, agreement between subject and predicate, etc). The rank correlation for the errors in the written and oral work in form 9 was found to be .93 which illustrates close agreement (Petersson, p 10). Errors committed in the written work in form 9 and in the first year of the gymnasium did not differ significantly as shown by the rank correlation .88. Engh´s interpretation of this fact is that the stage of learning and the study of different texts do not influence the rank order of the categories of errors (1968b, p 15). Finally, to scrutinize if poor pupils commit other types of errors than good pupils, the results of the five best and the five worst essays were examined. For the error categories chosen in the comparison, it was not possible to prove that these two kinds of pupils committed different types of errors (Engh, 1968b, pp 13-14).

PAKS. The PAKS-project (mentioned on p 18) has two main objectives, "(1) to make a detailed comparison of the structures of English and

German on all levels, and (2) to make suggestions for the application of the results of this contrastive analysis to the teaching of English to speakers of German" (Nickel, 1970, p 5). To this end the project has investigated various interlinguistic problems. Of the five reports published up to now, the fifth, Arbeitsbericht Nr. 5 (1970) is entirely given up to analyses of errors. The book Fehlerkunde (ed. Nickel, 1972) also deals exclusively with the description, evaluation, and elimination of errors. The corpus of errors is, as in the fifth report, based on the written work in English done by German pupils in their fourth year of English.

Of great relevance to the present study is the chapter "Zur Analyse syntaktischer Fehlleistungen" in Fehlerkunde (Drubig, pp 78-91) where the verbs were found to be the great trouble-makers. In 300 reproduction tests, 850 errors were listed, of which more than 500 were violations of rules for the verbs. A substantial group of errors in the verbs was caused by the pupils' inflecting the irregular verbs after the regular pattern. Errors due to intrastructural as well as to interstructural interference were observable.

Summary. The above exposition of studies on errors does not claim to be exhaustive. Besides, only a very superficial comparison between the investigations described can be made, as their principles of classification differ. It is evident that an ideal classification system is difficult to arrive at. Lexical items cause high frequencies of errors, and so does the verb, whether it be a question of English, German, or French. Differences between the source and the target languages often but not always lead to interference as regards lexis and structure. There is no evidence that oral tests bring about other types and frequencies of errors than written tests.

The Present Analysis of Deviances

The Corpus. The oral criterion consists of nine test items. In order to facilitate a survey of the deviances, the pupils' responses were listed separately for each school class under the respective test item. The result was a catalogue of how many of the pupils had offered correct solutions, how many had answered with deviant utterances, and how many had omitted to give any answer at all. The number of deviances and omissions in the two courses is illustrated below.

Course	N	Number of possible deviances	Deviances observed	Omissions
Ak	101	909	609 (67 %)	142 (15,6 %)
Sk	139	1,251	400 (32 %)	30 (2,4 %)

The corpus of the present study is thus 1,009 deviant utterances.

Principles. The pilot investigation had hinted at possible classes and sub-classes in a systematic classification of errors (p [illegible]). The guiding principle in the discussion of possible models, however, was that for the experiment proper the classification should not only classify the responses, but also rank them from slight to serious deviances. A rough scale of deviance dividing the incorrect responses into those with syntactic violations (representing the less serious deviances) and those with violations of semantic rules (representing the more serious deviances) was set up in "On the Concept of Error" (pp **7-9**). The basis on which a deviance was judged to be serious was to what degree it would block communication. The unity for assessing the number of errors was to be the individual response made by the pupil and not the number of violations within the response.

Classes and sub-classes. The system decided upon divided the responses into three big classes with the following content:

Class I	Correct Formation of the passive voice
Class II	The auxiliary "be" + a past participle but with inaccuracies in the construction
Class III	Correct and incorrect non-passive formations plus omissions

Neither omissions nor correct responses belong rightly to an error analysis, but they are here considered to complement the study of the errors.

Class II represents to a great extent violations of syntactic rules. As the responses contain attempts, though not wholly successful, at forming the verbal part in the passive sentence in question, these sentences will not form such a barrier to communication as responses under Class III, which embraces correct and incorrect verbal formations, with the trait in common that they are not passive. The responses are thus inappropriate in the context, and according

to the notions of the definition of error, they represent violations of semantic rules. Violations of this kind, as well as omissions of any response at all, were hypothesized to obstruct communication to a high degree.

Class II is further subdivided, first, into the three main sub-classes consisting of:

A Incorrect auxiliary + correct main verb
(abbr. II A: ia + cv)

B Correct auxiliary + incorrect main verb
(abbr. II B: ca + iv)

C Incorrect auxiliary + incorrect main verb
(abbr. II C: ia + iv)

If the deviance occurs in the auxiliary, which, after all, does not have the same importance for a listener interpreting a sentence, the error is considered to be less serious than if the main verb is deviant. However, if both verbs are deviant, the listener will have to perform two operations before he has reformed the utterance to agree with the corresponding well-formed sentence. The sub-classes A, B, and C thus rank passive formations from those with a slight deviance to those with more serious deviances from the point of view of ease of comprehension.

Within sub-classes A, B, and C there are further divisions. Regarding the auxiliary, they comprise deviances in number, tense, and use of non-finite forms. For the main verbs, the slots include regular inflection of irregular verbs, and vice versa. The last slot in B and C includes lexically incorrect verbs, for instance, the use of the past participle "beaten" instead of "bitten". The slot also contains incorrect formations of the past participle other than regular inflection of irregular verbs and vice versa, for instance, x('kɔ:tid) for "caught" and x niden for "hidden". These further divisions are indicated by small letters (a), (b), (c), and so on. The symbols II C ia (b) + iv (a) indicating a response to test item No 9 could thus be interpreted as x "The boy has been bited by the angry dog".

The second main group also contains sub-class D. This sub-class comprises verbal formations consisting of a form of the auxiliary

"be" plus a) the infinitive of the main verb, b) an infinitive with an s-ending, c) the past tense of irregular verbs, and d) the past tense of the main verb provided with an s-ending. Whether formations of this kind belong to class II (including incorrect passive formations) or to Class III (consisting of correct and incorrect non-passive formations) is debatable. It can be argued that the sentence X"The man was meet by his sweetheart" indicates that the pupil was less vague about how the verbal part of a passive sentence is formed than if he had written: X"The man was meeting by his sweetheart". A finite form of the auxiliary "be" plus a past participle identical with the infinitive is a possible combination in English (cf. the frequent verbs put, cut, shut, hit, set). That this pattern was at the back of the pupil's mind when he wrote, for instance, X"He was bite by the angry dog" is only a surmise. It could also be argued that the pupil might have had no idea at all of how to form the passive voice. He could have interpreted the test instructions to mean that he was to use the form "was", and after that he simply read out the infinitive of the main verb, which was printed in his papers. However, as the principle for ranking the deviant utterances is to what degree they are a barrier to communication, and as the utterance X"The murderer was catch by the policeman" is presumbably interpreted with greater ease than the utterance X"The murderer was catching by the policeman", when the correct answer in the context should be "The murderer was caught by the policeman", it was decided that sub-class D should be placed in the group of deviant utterances comprising incorrect passive formations.

Class III is also subdivided just as Class II, into a number of sub-classes. The main content of Class III is outlined below:

Class III	Non-passive Formations
A	Correct but not passive formations
B	Incorrect non-passive formations
	B1 Formations with an auxiliary plus a main verb
	B2 Formations consisting of a main verb only
	B3 Formations consisting of an auxiliary only
C	Omission of the verbal part

The complete model for the classification of the pupils' responses is found in Appendix B.

There were 1,251 responses in Sk and 909 in Ak to sort into the classes and sub-classes of the classification described above. I carried out this work. The two courses are treated separately in the resulting tables. The tables also illustrate how the correct answers, the types and frequencies of errors, and the omissions are distributed among the nine main verbs in the nine test items (Appendix C).

A classification system should give the same result when applied by different people. To check the usefulness of the present classification model, two teacher collegues were asked to use the system to classify the responses of four school classes each. The result was identical with the first.

Problem areas. Very generous allowance was made for acceptance of the regular past participles. If the past participle ended in a dental, and if no verb exists in a form identical with the pupil's formation, which could have caused a misunderstanding, the formation was counted as satisfactory. The verb "invite", however, raised a special problem. It already has a dental ending in the infinitive. Thus two dental endings are necessary for the verb to be considered correct. The utterance X"She was [inve'teit] (for "invited") was allowed, but X"She was ['intəveit]"was not. Sub-class II D also includes dubious cases. Thus X['hidə](for "hide") X[kɔ:r] (for "cover") and X['baiti] (for "bite") were counted as infinitives because Swedish school children could pronounce the verbs in question as above in cases of great ignorance of the relationship between spelling and pronunciation in English. This is,admittedly, an arbitrary interpretation. For the verbs "bite" and "hide" there are double forms in the past participle. However, if the pupil had never heard or seen the shorter forms "bit" and "hid", he did not demonstrate a mastery of the verb when using the shorter form. The dilemma of scoring and, later, classifying was solved as follows. For "hide", the form "hidden" was the only one accepted, but for "bite" the form "bit" in the past participle was approved, as the double forms of this verb are mentioned in a school grammar used at this stage of the comprehensive school in Sweden (Slettengren-Widén, A Modern English Grammar, Shorter edition, 1966).

Results

Results in the Three Main Classes. Table 4 shows the distribution of the testees' responses in the three main classes.

Table 4. Distribution of Responses Within the Three Main Classes

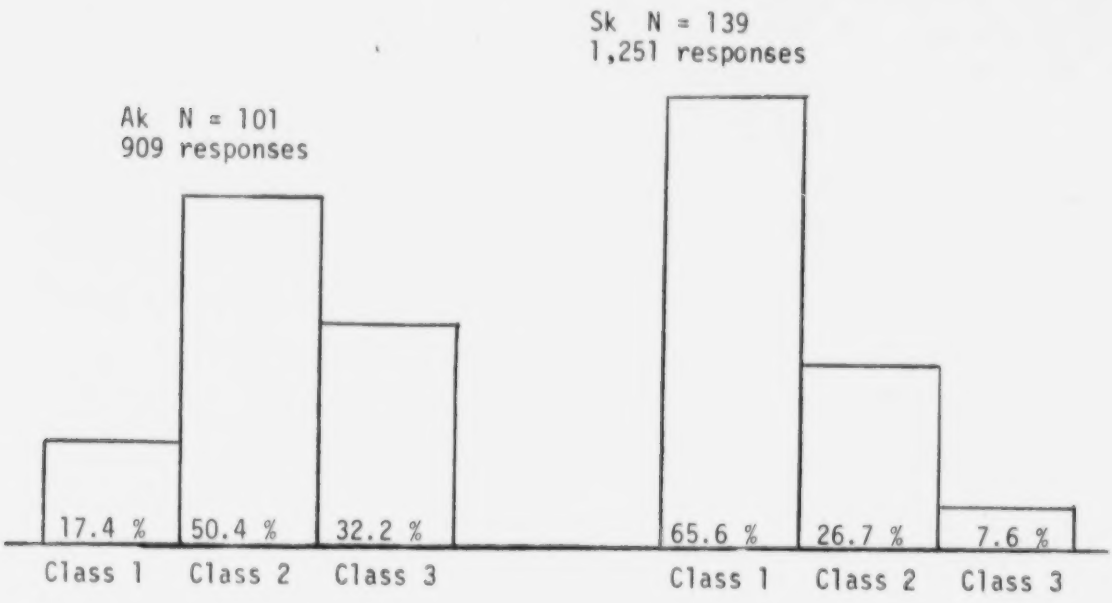
	N	Class 1 %	Class 2 %	Class 3 %
Ak	101	17.4	50.4	32.2 (Omissions 15.6)
Sk	139	65.6	26.7	7.6 (Omissions 2.4)

(Class 1 denotes the correct responses, Class 2, the sentences with deviant passive verbal forms, and Class 3, non-passive formations and omissions).

The highest figure in Table 4 is for the correct responses made by Sk. In Ak the position is reversed; here Class 1 has the lowest figure. Approximately two-thirds of the sentences are correct in Sk, while not one fifth of the sentences are correct in Ak. In Class 2, Ak has about twice as many errors as Sk, while in Class 3, which contains the most serious deviances, Ak has more than 4 times the number of deviances found in Sk. In both courses, the bulk of errors is, however, found in Class 2.

Figure 1 illustrates the substantial differences between the courses:

Figure 1. Distribution of Responses in the Two Courses



As mentioned earlier (p 24) Engh (1968) discussed whether pupils with many errors and those with few errors commit the same types of errors. He found that this was, in fact, the case. Ak undeniably commits more errors than Sk, but a comparison of the contents of Class 3 in the two courses clearly indicates, that the errors they commit are of different types, that is, what are here considered to be the more serious errors, are found in Ak to a much greater extent than in Sk.

Types of deviances. In Tables 5 and 6 the types of deviances occurring in Ak and Sk are shown to be 47 and 40 respectively. The difference in the number of types of deviances in the two courses is statistically insignificant (X^2 = .56. Critical value 3.84 for p. $<$ .0.05).

Ak and Sk had 31 types of errors in common. In Ak 16 types of errors, representing 38 cases, had no counterpart in Sk. For Sk there were nine types of errors, corresponding to 14 cases, which were not found in Ak (Table 7). The general impression is, thus, that in Ak, deviances not found in Sk, were both more numerous and, moreover, represented by higher frequencies than the corresponding deviances found in Sk but not in Ak.

Table 5. Types of Errors. Ak. N = 101

Types of Errors Formally Defined	Frequency of occurrences Raw scores	Per cent of 909
Was + infinitive of main verb	190	20.90
Was + regular inflection of irregular verb	107	17.66 [x]
Infinitive of main verb (no auxiliary)	44	4.84
Is + infinitive of main verb	39	4.29
Was + remaining incorrect formations of past participle	29	3.19
Was + present participle-form of main verb	29	3.19
Incorrect tense of "be" + past participle of main verb	20	2.20
Non-finite form of "be" + infinitive of main verb	18	1.98
Incorrect tense of "be" + regular inflection of irregular verb	11	1.82 [x]
Non-finite form of "be" + past participle of main verb	16	1.76
Remaining incorrect formations of main verb (no auxiliary)	11	1.21
Was (no main verb)	10	1.10
3rd person present of main verb	6	0.66
Had + infinitive of main verb	6	0.66
Non-finite form of "be" + present participle of main verb	6	0.66
Was + past tense of irregular verb (hid)	4	0.66[x]
Has + infinitive of main verb	5	0.55
Non-finite forms of "be" + regular inflection of irregular verbs	3	0.50 [x]

[x] The asterisk beside the percentage figure means that the total sum of possibilities is 606, not 909, as some errors affect the six irregular verbs only.

Types of Errors Formally Defined, Ak	Frequency of occurrences Raw scores	Per cent of 909
Incorrect tense of "be" + remaining incorrect formations of past participle	4	0.44
Non-finite forms of "be" + remaining incorrect formations of past participle	4	0.44
Is + present participle-form of main verb	4	0.44
Has been + present participle form of main verb	4	0.44
Had + remaining incorrect formations of past participle	3	0.33
Was + infinitive with an s-ending	3	0.33
Have + past participle of main verb	3	0.33
Non-finite forms of "be" (no main verb)	3	0.33
Was + irregular inflection of regular verb	1	0.33 xx
Were + past participle of main verb	2	0.22
Were + remaining incorrect formations of past participle	2	0.22
Past tense of main verb	2	0.22
Has + past participle of main verb	2	0.22
Have + infinitive of main verb	2	0.22
Have, had + present participle of main verb	2	0.22
Were + regular inflection of irregular verb	1	0.17 x
Non-finite form of "be" + past participle with an s-ending (bits)	1	0.17 x
Non-finite form of "be" + past tense of irregular verb (hid)	1	0.17 x

x One asterisk means that the total sum of possibilities is = 606.

xx Two asterisks mean that the total sum of possibilities is = 303, there being only three regular verbs.

Types of Errors Formally Defined, Ak	Frequency of occurrences Raw scores	Per cent of 909
Incorrect number and tense + remaining incorrect formations of past participle	1	0.11
Had + past participle of main verb	1	0.11
Main verb in future tense	1	0.11
Has + remaining incorrect formations of past participle of main verb	1	0.11
Are + infinitive of main verb	1	0.11
Has been + infinitive of main verb	1	0.11
Are + present participle of main verb	1	0.11
Is + lexically incorrect present participle form	1	0.11
Main verb of incorrect form (past participle + -s or past tense + -s, no auxiliary)	1	0.11
Incorrect tense of "be" (no main verb)	1	0.11
Had (no main verb)	1	0.11

Table 6. Types of Errors. Sk. N = 139.

Types of Errors Formally Defined	Frequency of occurrence	
	Raw scores	Per cent of 1.251
Was + regular inflection of irregular verbs	81	9.71 X
Incorrect tense of "be" + past participle of main verb	66	5.28
Was + infinitive of main verb	51	4.08
Was + remaining incorrect formations of past participle	45	3.60
Were + past participle of main verb	19	1.52
Non-finite forms of "be" + past participle of main verb	16	1.28
Was + past tense of irregular verb (hid)	10	1.20 X
Is + infinitive of main verb	12	0.96
Were + regular inflection of irregular verb	7	0.84 X
Was + present participle-form of main verb	9	0.72
Is + present participle-form of main verb	8	0.64
Past tense of main verb	7	0.56
3rd person present of main verb	6	0.48
Infinitive of main verb (no auxiliary)	6	0.48
Incorrect tense of "be" + regular inflection of irregular verb	4	0.48 X
Non-finite form of "be" + regular inflection of irregular verb	3	0.36 X
Is + past tense of irregular verbs (hid)	3	0.36 X
Were + infinitive of main verb	4	0.32
Was (no main verb)	4	0.32

X The asterisk beside the percentage figure means that the total sum of possibilities is 834, not 1.251, as some errors affect only the irregular verbs (6 x139 = 834)

Types of Errors Formally Defined. Sk.	Frequency of occurrence	
	Raw scores	per cent of 1.251
Were + remaining incorrect formations of past participle	3	0.24
Incorrect tense of "be" + remaining incorrect formations of past participle	3	0.24
Has + past participle of main verb	3	0.24
Main verb in future tense	3	0.24
Had + infinitive of main verb	3	0.24
Incorrect tense of "be" (no main verb)	3	0.24
Had + past participle of main verb	2	0.16
Has + infinitive of main verb	2	0.16
Has + remaining incorrect formations of past participle of main verb	2	0.16
Non-finite form of "be" + infinitive of main verb	2	0.16
Non-finite form of "be" + present participle form of main verb	2	0.16
Non-finite forms of "be" (no main verb)	2	0.16
Incorrect number and tense of "be" + remaining incorrect formations of past participle	1	0.08
Have + remaining incorrect formations of past participle	1	0.08
Was + infinitive with an s-ending	1	0.08
Non-finite form of "be" + infinitive with an s-ending	1	0.08
Were + past tense with an s-ending	1	0.08
Were + present participle form of main verb	1	0.08
Will + other incorrect formations of main verb	1	0.08
Were (no main verb)	1	0.08
Has (no main verb)	1	0.08

Table 7. Enumeration of Errors Found only in Ak and Sk Respectively

Errors in Ak Not Found in Sk

Types of Errors Formally Defined	Frequency of occurrence	
	Raw scores	Per cent of 909
Remaining incorrect formations of main verb	11	1.21
Non-finite forms of "be" + remaining incorrect formations of past participle	4	0.44
Has been + present participle of main verb	4	0.44
Had + remaining incorrect formations of past participle	3	0.33
Have + past participle of main verb	3	0.33
Was + irregular inflection of regular verb	1	0.33 xx
Have + infinitive of main verb	2	0.22
Have, had + present participle of main verb	2	0.22
Non-finite form of "be" + past participle with an s-ending (bits)	1	0.17 x
Non-finite form of "be" + past tense of irregular verb (hid)	1	0.17 x
Are + infinitive of main verb	1	0.11
Has been + infinitive of main verb	1	0.11
Are + present participle of main verb	1	0.11
Is + lexically incorrect present participle form	1	0.11
Main verb of incorrect form (past participle + -s or past tense + -s, no auxiliary)	1	0.11
Had (no main verb)	1	0.11
	16 types in all	

x One asterisk means that the total sum of possibilities is = 606, there being only six irregular verbs

xx Two asterisks means that the total sum of possibilities is = 303, there being only three regular verbs

Errors in Sk not found in Ak

Types of Errors Formally Defined	Frequency of occurrence	
	Raw scores	Per cent of 1.251
Is + past tense of irregular verbs (hid)	3	0.36 x
Were + infinitive of main verb	4	0.32
Have + remaining incorrect formations of past participle	1	0.08
Non-finite form of "be" + infinitive with an s-ending	1	0.08
Were + past tense with an s-ending	1	0.08
Were + present participle form of main verb	1	0.08
Will + remaining incorrect formations of main verbs	1	0.08
Were (no main verb)	1	0.08
Has (no main verb)	1	0.08
	9 types in all	

The rank order of the 31 types of errors common to the two courses was not identical. This could be suspected from the divergent figures for errors in Class 3 (p 30). The rank correlation calculated for the 31 types of errors in the two courses amounted to .57 (Angsmark, 1970, p 211). Thus, once again, it becomes clear that the more ignorant pupils, as represented by Ak, do not make the same types of errors as Sk, where the pupils are supposed to know more of the language. That this was not found by Engh (1968b) could be due to the fact that only a small number of pupils was used to establish what kind of errors occurred, or to inherent differences between the German and English languages.

Mistakes. If one occurrence within a type of error is counted as a mistake, that is, a deviance due to an occasional slip or a lapse of memory, etc., Tables 5 and 6 show that there are 15 mistakes in Ak and nine in Sk. Of the 1,181 deviant utterances forming the basis of this study, only 24 are thus mistakes, i.e. 2.03 per cent. This figure lags far behind 25 per cent recorded for mistakes in Dusková's study (p 20) and even the 3.5 per cent of mistakes in Grauberg's study (p 22). Consequently, there seems to be some system behind the errors committed by the pupils in the oral criterion.

Interference from the Source Language. The grammatical structures in the GUME experiments had been chosen because they were different in the English and Swedish languages. Thus the passive voice, chosen for GUME 3 and 5, can, in Swedish, in the present and past tenses, be formed either with an auxiliary and a main verb or with a main verb only, plus an s-ending. In English, there is only one possibility, that is, with an auxiliary and a main verb. This is thus a case where contrastive analysis would predict interference from the source language in the pupils' responses.

There were, in all, seven instances in Ak and nine in Sk, where interference from the Swedish s-passive was considered to exist (see Table 8). The resulting deviant utterances fall into two groups. The first group is exemplified by the sentence: X"He bites by the angry dog" (cf. the Swedish: "Han bits av den arge hunden"), that is, the s-ending is added to the main verb and no auxiliary is used, just as in Swedish. The second group is illustrated by the sentence X"The ground

Table 8. Distribution of S-Passives in the Courses and Methods

	Sentence	Ak			Sk		
		Im	Ee	Es	Im	Ee	Es
Group 1	1. He bites by the angry dog (2)		+				+
	2. It buys by the lady (1)						+
	3. It hides under the bed (1)		+				
	4. The money hides under the bed (1)						+
	5. The man meets by his sweetheart (1)						+
	6. The man mets by his sweetheart (1)			+			
	7. He tells to work more by his teacher (2)			+			+
Group 2	1. He been bits by the angry dog (1)		+				
	2. It was buys by the lady (1)		+				
	3. He was ['kaet͡ʃiz] by the policeman (1)			+			
	4. The ground was covers by leaves (2)	+					+
	5. It been hides under the bed (1)						+
	6. It were hits under the bed (1)				+		

was covers by leaves", where the pupils have tried a fusion of the English and Swedish way of forming the verbal part of the passive sentence by using the auxiliary "be" plus an s-ending added to the main verb. Only sentences with an agent are included in the first group, as the s-ending could otherwise be interpreted as the "s" of the third person in the present tense. Sentences with the verb "hide" form an exception, however. As "hide" demands an animate subject, "the money" cannot be the logical subject of the sentence, and therefore the s-ending is interpreted as interference from the Swedish s-passive. Finally, utterances such as *"He tells the boy to work more by his teacher" represent a type of deviance which is not included in the first group.

During the experimental instruction of GUME 5, the pupils within the Explicit Swedish strategy had had the differences between the English and Swedish passive constructions explained to them, and not only, as in the Explicit English strategy, discussed how the verbal part of an English passive sentence is formed. The Explicit Swedish pupils could therefore be expected to avoid s-passives in English. There is, however, no evidence in Table 8 that the pupils within the Explicit Swedish strategy escaped interference from the mother tongue to a higher degree than those in the remaining two strategies. The conclusions to be drawn from Table 8 are, consequently, that interference from the corresponding Swedish s-passive is traceable to a small extent in both courses, and that explanations on the different structures in English and Swedish did not, in this case, prevent the pupils from making this particular kind of error.

Correct Responses and Omissions for the Nine Verbs. The nine test items contained nine different verbs; three regular and six irregular. Of great interest is the degree of success and failure for the separate verbs. In the following, the correct versions for each verb will be compared to the number of omissions. A great number of deviant responses found for one particular verb does not indicate that this verb is very difficult. It could mean that the verb is fairly easy, as otherwise the pupils would not have said anything at all. The regular verbs introduce the survey below. The irregular verbs follow in the order they were presented in the oral criterion.

Table 9. Correct Reponses and Omissions in Percentages, Ak. N = 101

	cover	invite	wash	hide	tell	catch	buy	meet	bite
Correct version	42.6	22.8	32.7	1.0	17.8	5.0	14.9	8.9	10.9
Omission	20.8	20.8	15.8	12.9	23.8	5.9	12.9	12.9	14.9

In Ak the highest scores for correct responses are found in the three regular verbs, followed by the irregular verb "tell". "Catch" has a low figure for correct answers, but also a low figure in the omission column. This means that in spite of great ignorance of what the correct form should be, the pupils made many, though unsuccessful, attempts at saying something. "Hide" has the lowest figure for success for all nine verbs. Remarkably enough, the regular verbs and the verb "tell" have high figures for omsissions, a fact which is inexplicable.

A similar table for Sk has the following figures:

Table 10. Correct Responses and Omissions in Percentages, Sk. N = 139

	cover	invite	wash	hide	tell	catch	buy	meet	bite
Correct version	78.4	77.0	80.6	34.5	73.4	56.8	78.4	68.3	43.2
Omission	1.4	2.9	1.4	6.5	1.4	0.7	1.4	1.4	4.3

In Sk, just as in Ak, the regular verbs have high scores for correct responses and also a high figure for success for the irregular verb "tell". "Hide" has the lowest figure for successful responses in both courses. Another similarity between the courses is that the verb "catch" has a rather low score of success, and also a low figure for omissions. On the whole, though the figures are widely disparate, a fact which emphasizes the unequal abilities of the pupils in Ak and Sk, the relative position between the verbs is similar as shown in their rank order in Table 11.

Table 11. Rank Order of the Nine Verbs in Ak and Sk

Verb	Rank Order	
	Ak	Sk
cover	1	2.5
wash	2	1
invite	3	4
tell	4	5.5
buy	5	2.5
bite	6	5.5
meet	7	7
catch	8	8
hide	9	9

A rank correlation for Ak and Sk was calculated (Angsmark, 1970, p 211), and found to be .85.

Frequency of the Nine Verbs. The fact whether the verb in the nine test items is regular or irregular was shown to influence the result in both Ak and Sk.

The frequency of the nine individual verbs is another aspect which could have affected the outcome. A first check in the Thorndike-Lorge list of 30,000 words (1959) revealed that six of the nine verbs (buy, catch, cover, meet, tell, wash) have 100 or more occurrences per million words. This is also true of "told", "caught", and "met". Furthermore, "cover", "meet", and "tell" belong to the 500 most common words in the language by the Thorndike count. Two verbs (hide and invite) have at least 50, but not as many as 100 occurrences per million words. The verb "bite", finally, is the most infrequent of all nine verbs, as it occurs only 35 times in a million words.

The vocabulary of the texts on which frequency counts are based are, by necessity, influenced by theme and genre. Even if a great many texts are used, a word-count does not, therefore, give a true reflection of the average frequency of a word in the language as a whole. Furthermore, in the Thorndike-Lorge list, "cover" and "bite", for instance, are represented by a combined figure for the appearance of the word as a noun and as a verb, something which should be kept in mind. Even if frequency lists had not suffered from any short-

comings, an attempt to establish a relationship between success for a certain verb in the test items and a high frequency of the verb in question could only be meaningful if the instruction had been based on frequency lists, which is not the case. Besides, as Lado (1957) points out, frequency lists "cannot give us a vocabulary graded as to difficulty because by their very nature they fail to take into account the most powerful factor in acquiring the vocabulary of a foreign language, namely, the vocabulary of the native language" (p 81).

The Swedish verb bita, being phonetically similar to "bite" and identical in meaning, is an illustration of how the source language can facilitate the learning of a new word, and perhaps this is why "bite", although less frequent than "hide", has higher scores for success. Bearing in mind the above reservations concerning the use of frequency lists, notice should nevertheless be taken of the fact that in Tables 9 and 10 whatever their frequency, the regular verbs have very high figures for success in both courses.

Distribution of Deviances in the Two Courses. In order to facilitate a general survey of the deviant responses, the two tables 12 and 13 were set up. Only deviances of one per cent frequency or more of the totals 909 and 1,251 were included in the tables, as the main objective is an attempt to detect some kind of trend in the distribution of deviant utterances. The sum of the types of deviances for each verb as well as the cumulative figure for the deviances in per cent is given at the foot of the tables.

Tables 12 and 13 show that both in Ak and Sk the number of types of deviances is strikingly lower for the regular than for the irregular verbs. Especially in Sk but also in Ak, there are few instances of deviances belonging to Class 3, that is, what are here defined as the most serious deviances, in the columns for the regular verbs. The mean in per cent for the most serious deviances is about twice as high for the irregular as for the regular verbs.

The present study thus finds that the three regular verbs entail fewer types of deviances and less serious deviances than the six irregular verbs. The limitation of the material means, however, that these observations are not applicable to regular and irregular verbs in general.

Table 12. Distribution of Errors in Ak. N = 101

		cover	invite	wash	hide	tell	catch	buy	meet	bite
IIA ia cv	(a)			+						+
	(b)	+	+	+	+	+		+	+	
	(c)	+	+	+				+	+	
IIB ia cv	(a)				+	+	+	+	+	+
	(b)	+								
	(c)	+	+	+	+		+	+	+	+
IIC ia iv	(aa)					+				
	(ba)					+	+	+		+
	(da)							+		+
	(ad)				+			+		
	(bd)		+				+			+
	(dd)									+
	(dc)									+
	(cd)	+								
IID a iv	(aa)	+	+	+	+	+	+	+	+	+
	(ba)	+	+	+	+		+	+	+	+
	(da)		+	+	+		+	+	+	+
	(ac)				+					
	(ea)	+								
	(fa)		+							
	(ab)	+					+	+		
	(dc)				+					
IIIA	(a)				+	+		+		+
	(b)		+						+	
	(c)	+			+					
	(d)			+						
	(e)			+	+	+	+	+	+	+
	(f)		+	+						+

Table 12. Distribution of Errors in Ak. N = 101. Continued

		cover	invite	wash	hide	tell	catch	buy	meet	bite
	(g)							+		
	(h)			+		+			+	+
aA IIIB1 vA	(aa)		+		+		+		+	
	(ba)	+			+		+			+
	(ab)				+					
	(bb)	+	+							
	(ca)				+	+				
aB IIIB1 vB	(aa)			+	+		+	+	+	+
	(ba)								+	+
	(ca)							+	+	
aC IIIB1 vC				+					+	+
IIIB2	(a)	+	+	+	+	+	+	+	+	+
	(b)								+	
	(c)		+		+	+	+	+		+
IIIB3 b	(a)			+	+	+			+	
	(c)								+	
	(d)					+	+	+		
IIIB3 h	(b)				+					
Number of different types of errors		13	14	15	21	13	15	19	19	21
Errors in per cent		36.8	57.4	51.6	85.4	58.6	89.2	72.6	78.5	74.6
Errors in Class 3 in per cent		8	8	17	18	16.9	15.9	17.9	30.8	16.0

Table 13. Distribution of Errors in Sk. N = 139

		cover	invite	wash	hide	tell	catch	buy	meet	bite
IIA $^{ia}_{cv}$	(a)	+	+	+		+				
	(b)	+	+	+	+	+	+	+	+	+
	(c)	+	+		+	+	+	+		
IIB $^{ca}_{iv}$	(a)				+	+	+	+	+	+
	(b)									
	(c)		+		+		+		+	+
IIC $^{ia}_{iv}$	(aa)				+		+			+
	(ba)				+					
	(da)						+			
	(ad)									+
	(bd)									+
	(cd)									
IID $^{a}_{iv}$	(aa)	+	+		+		+		+	+
	(ba)				+		+		+	
	(da)									
	(ca)								+	
	(ac)				+					
	(bc)				+					
IIIA	(a)					+				
	(b)	+		+					+	
	(c)	+								
	(e)				+	+			+	
	(f)				+	+			+	
IIIB3	(a)							+		
Number of different types of errors		6	5	3	12	7	8	4	9	7
Errors in per cent		18	16.6	12.2	54.6	20.1	37.5	13.6	24.3	46.6
Errors in Class 3 in per cent		2.8	0	1.4	3.6	5.0	0	1.4	4.2	0

Which Deviances are the Most Common? Tables 5 and 6 enumerate the types of deviances in rank order. According to these tables, the most common type of deviance is in Ak "was" plus the infinitive of the main verb, and in Sk, "was" plus the regular inflection of the irregular verb. In Ak, there are 190 instances of the deviance in question, which means 20.9 per cent of the possible deviances, that is 909. In Sk, the corresponding figure is 81 occurrences, which constitute 9.7 per cent of the 1,251 possible deviant utterances. The differences between Ak and Sk are here again striking. Not only does the most frequent type of error in Ak have a much higher frequency than the corresponding most common error in Sk, it also bears out that the pupils in Ak had a more superficial knowledge of the formation of the past participle of the English verbs than did the pupils of Sk (see discussion on p 28).

Tables 14 and 15 were also set up to show the most frequent deviant utterances within the types of errors. Here, most surprisingly, it is found that the most common deviance in the two courses occurs within the same test item, that is, No 4, containing the verb "catch". For Ak, the sentence runs: x"He was catch by the policeman" and for Sk: x"He was [kaetʃt or 'kaet[id] by the policeman". There were 101 pupils in Ak, and of these, 36 responded with the above deviance to test item No 4, which means 35.64 per cent of the pupils. In Sk, there were 24 occurrences of the most frequent deviant utterance which implies that 17.27 per cent of the 139 pupils gave this response. It was observed earlier (p 42) that the verb "catch" had a low number of correct responses and also a low number of scores in the omission column. It should, consequently, be found with great frequency among the deviant utterances, something which is also the case.

In Ak, by the way, the most common deviance in Sk holds place eight in the rank order, while in Sk, the most common deviance in Ak occupies place No 12 in the rank order.

Table 14. The 20 Most Common Errors Ranked in Order of Frequency (Ak). N = 101

Test Response	Occurrences of the sentence	Frequency in per cent of 101
He was catch by the policeman	36	35.64
The money was hide under the bed	35	34.65
He was teld to work more by his teacher	31	30.69
The girl was invite to a party	31	30.69
The TV was buyed by the lady	25	24.75
The man was meet by his sweetheart	24	23.76
The boy was bite by the angry dog	24	23.76
The thief was [kaetʃt], ['kaetʃid] by the policeman	21	20.79
The ground was cover by leaves	15	14.85
The man meet by his sweetheart	13	12.87
The man was meeted by his sweetheart	12	11.88
The TV was buy by the lady	11	10.89
The car was wash and looked like new	9	8.91
The boy was ['baitid] by the angry dog	9	8.91
The car been washed and looked like new	9	8.91
The money was ['haidid] under the bed	9	8.91
The money was ['haidən] under the bed	9	8.91
The TV was buying by the lady	8	7.92
The man was meeting by his sweetheart	8	7.92
The boy was ['baitiŋ] by the angry dog	7	6.93

Table 15. The 20 Most Common Errors Ranked in Order of Frequency (Sk). N = 139

Test Response	Occurrences of the sentence	Frequency in per cent of 139
He was [kaetʃt], [kaetʃid] by the policeman	24	17.27
The boy was ['baitən] by the angry dog	24	17.27
The money was ['haidid] under the bed	18	12.95
The money was hide under the bed	16	11.51
The boy was ['baitid] by the angry dog	17	12.23
The ground is (has been, etc) covered by leaves	13	9.35
The boy was bite by the angry dog	12	8.63
The girl is (has been, etc) invited to a party	10	7.19
The car is (has been, etc) washed and looked like new	10	7.19
The money was hid under the bed	10	7.19
The money was ['haidən] under the bed	9	6.47
The thief was catch by the policeman	9	6.47
He was teld to work more by his teacher	8	5.76
The man was meet by his sweetheart	8	5.76
The TV is (has been, etc) bought by the lady	7	5.04
The boy is (has been, etc) told to work more by his teacher	6	4.32
The thief is (has been, etc) caught by the policeman	6	4.32
The boy is (has been, etc) bitten by the angry dog	6	4.32
The TV was buyed by the lady	6	4.32
The money is hide under the bed	6	4.32

The most frequent type of deviance but one in Ak is identical with the most common type of deviance in Sk, that is, "was" plus the regular inflection of an irregular verb. In Sk, the second most common type of deviance was incorrect tense of "be" plus the correct form of the main verb. This type of error occurred with the greatest frequency with the verb "cover" which opened the oral criterion, something which might explain the deviance, that is, full consciousness of what tense was required in the answer had not yet set in.

The use of the infinitive of the main verb without any auxiliary ranks as the third most common type of deviance in Ak. The pupils here just read from their papers the infinitive written under the individual test item. This type of deviance occupies place number 14 in Sk. The third most common type of deviance in Sk is the same as the most frequent type in Ak, that is, "was" plus the infinitive of the main verb. As the fourth and fifth number in the rank order of types of deviances in Sk and Ak respectively, there is an identical deviance, namely the correct form of the auxiliary "be" plus the remaining incorrect formations of the past participle, exemplified by the sentence: *"The boy was biten by the angry dog".

Tables 5 and 6 show that in the two courses there are distinct groupings of types of deviances as far as frequency is concerned. In both courses the first two types of deviances form one group of considerable size. The next two types form a group of palpable size, too, but the frequency of the types of deviance is rapidly decreasing after the first two groupings.

Discussion of Some Errors. Among the types of deviances described in this chapter, there are those which learners of English as a first language as well as learners of Swedish as a first language will commit, for instance, the use of the regular inflection in the past participle of an irregular verb. This is not because of imitation, as the English child has very probably not heard *goed or *bited in its linguistic environment. In Swedish the regular verbs have in an extensive survey of the Swedish language (Allén, 1971) been found to be less frequent individually than the irregular, and this is also the case in English. It is thus not an effect of frequency of occurrence that makes the child apply the regular inflection on

irregular verbs. The reason for this appears to be that the regularity of a linguistic pattern facilitates the language acquisition process.

This has also been observed in related work. When studying small children learning the mother-tongue, Ervin (1966) found that the children used the correct past tense of the irregular verbs very early, but later started to inflect them as regular verbs (pp 163-89). McNeil (1966) comments upon this as follows: "It seems to be that each strong verb, although frequent, is unique unto itself. In contrast, the weak verbs, although infrequent, all exemplify a pattern. Apparently patterns weigh more heavily with children than frequency of repetition does" (p 71).

The regular inflection of the irregular verbs was the most frequent deviance in Sk and the second most frequent in Ak. The opposite case, that is, that an irregular inflection is applied on a regular verb, occurs once in 720 possibilities in Ak and Sk ([ˈkrauən] instead of "covered"). The result of an error analysis of German pupils writing a reproduction in English corroborates the result of the present study (see p 75). The occurrence of systematic errors of this kind is to some linguists evidence of systematizing factors in the child, presumably innate (Brown and Fraser, 1970, p 337, Campbell and Wales, 1971, p 258).

The learning situations for the first and second language are, admittedly, far from identical. Nevertheless, in the regular inflection of the irregular verb, there is a parallel. Another parallel is found in the formation of the past participle of irregular verbs. A Swedish child can mix up two models of forming the past participle when learning the first language. Thus it can say ^{x}drickit instead of druckit and ^{x}knytit instead of knutit. Similarly, the Swedish pupils mixed up two different patterns for forming the past participle of irregular verbs in English, and produced the non-existent forms ^{x}meeten instead of "met", ^{x}hiden instead of "hidden",and ^{x}biten instead of "bitten".

The third most common deviance in Ak was using the infinitive of the main verb without any changes and without any auxiliary. The present tense is in most texts more frequent than any other tense, and, undoubtedly, the active voice is much more frequent than the

passive (see, for instance, Hudson, 1968, p 10), and besides, a construction that the English or Swedish child learning its mother tongue acquires before learning the passive. In the selection of materials for language courses in English the order of the present tense being taught before other tenses and the active before the passive is also adhered to. Using the infinitive instead of the passive voice in the past marks an elementary stage of language acquisition, which is further stressed by the fact that this deviance has the third place in Ak while it occupies rank number 14 in the order of types of deviances in Sk.

The use of the progressive form instead of the passive voice could, like the preceding deviance, be due to what Nickel (1971) calls "chronological priority", as the progressive is introduced in language courses at an earlier stage than the passive voice. He also suggests that such deviances could result from too intensive pattern practice (p 224). It is, besides, a striking example of intrastructural interference.

It could be expected that Ak would commit more errors than Sk as the linguistic patterns were evidently less firmly established in that course. How then can one explain the occurrence of 35 faulty cases of "were" in Sk while there are only five such errors in Ak? The answer may be that "was" is the first form to be learnt, and perhaps also, that in the source language, there is only one form in the past tense of "be". The Ak-classes had evidently not learnt very much about the existence of "were", and therefore, through their limited knowledge of the target language they were not tempted to use "were" incorrectly.

Summary

In Chapter 3 the error analysis showed that the frequency of deviances was substantially higher in Ak than in Sk. The types of deviances were more numerous in Ak, too, but the difference was not statistically significant. However, there were conspicuously more serious deviances in Ak than in Sk.

For the regular and irregular verbs, considerable differences in result were found in the pupils' responses. The regular verbs gave rise to fewer types and lower frequencies of deviances. The types

were, furthermore, of a less serious nature in both courses. The regular verbs had, in addition, more correct responses than the irregular, whatever their frequencies in the Thorndike-Lorge word-list were. The dissimilarity in result for the regular and irregular verbs was common to the two courses.

The very frequent deviance consisting of regular inflection of irregular verbs stresses the importance of systematic patterns in the language acquisition process. Very few unsystematic deviances (that is, deviances which occurred once only) were found in the deviant utterances. There were 16 fairly clear cases of an s-passive attributable to interstructural interference. Intrastructural interference was manifest in the use of the progressive form instead of the passive voice. This type of deviance, as well as the use of the infinitive instead of the passive voice, could be regarded as an effect of the chronology of learning, as the infinitive and the progressive are taught and practised long before the passive voice is introduced. Intrastructural interference was also observable in the mixing-up of different models for the formation of the irregular past participle, and in the use of "were" instead of "was".

THE INFORMANT EXPERIMENT

Informant Testing

The second purpose of this study is to test the acceptability and intelligibility of the Swedish pupils' responses in the oral criterion by eliciting the verdicts of native informants.

Informant testing is nothing novel in linguistic connections, but it has of late proved to be of increasing utility when complementing corpora of written and spoken language. Below, a few such studies will be mentioned.

Attitudes to Linguistic Problems. An experiment using the direct questioning procedure in informant testing is described in Attitudes to English Usage (Mittins et al., 1970). In this enquiry into contemporary linguistic usage a questionnaire was sent out to 500 people. Of these, 457 answered. The respondents included, among others, school and university teachers, examiners, lecturers in different types of colleges, teacher trainees, administrators, salesmen, doctors, and lawyers.

The 55 sentences chosen for the investigation are indisputably in use, but, nonetheless, considered from the point of view of logic, grammatical accuracy, meaning, and "ipsedixitisms" to be dubious. The informants were told to state if the sentences were permissible in four types of situation: Informal Speech, Informal Writing, Formal Speech, and Formal Writing. The general tendency was to disapprove rather than to accept. Tolerance lessened with age, but teachers and lecturers were not found to be more censorious than other professions. Examiners had the most negative attitude, and students the most tolerant.

The investigators are aware of the fact that when somebody is asked if a particular utterance is correct, there may be no natural reaction. Either the informant tries to remember what he was taught at school, or he might choose what would be thought to be the more refined expression. This may not correspond at all either to his actual

opinion of the sentence or to what he himself says. The particular procedure of this enquiry implies that the informants had plenty of time to consider the appropriateness of the sentences and even to consult others and discuss the sentences with them, which means a complete loss of spontaneity. The investigation may reflect attitudes, but it is clear that corroboration of more rigorous techniques to elicit responses, which consider usage as well, are necessary for more precise information on linguistic matters.

The University College Experiments. In experiments conducted at University College, London, Quirk and Svartvik initiated the use of new and stringent procedures in informant testing. They describe in Investigation Linguistic Acceptability (1966) how, when the direct questioning method was used, the informants' feeling for distinctions decreased seriously after a few examples. To avoid this pitfall, the informants were asked to perform an operation on a slightly deviant utterance. Their attention was consequently diverted from the crucial point. If they performed the operation without at the same time changing the critical part of the sentence, this was interpreted as acceptance of the sentence (p 15). Two other kinds of tests were later added to this "Operation Test". One is the "Selection" test, which is used in cases of divided usage. The sentence "Neither he nor I knew the answer" where the operation task is to put the sentence in the present tense, may serve as an example. The second type is the "Judgement Test". In this test the informants are asked to mark sentences according to the three-point-scale "natural and normal", "unnatural and abnormal", and "intermediate between these extremes" (p 20). In the administration of the test battery, the Operation Test always precedes the Judgement Test, which repeats the same sentences. The Judgement Test, which in itself is not a very reliable instrument for eliciting evaluation of linguistic problems, exercises in conjunction with the Operation Test a control of the results, i.e. willingness to perform an operation while keeping the sentence deviant should be matched with an acceptance of the sentence in the Judgement Test.

Further elaboration of the testing techniques has been undertaken in Elicitation Experiments in English, Linguistic Studies in Use and Attitudes by Greenbaum and Quirk,(1970). Informant testing for

specific linguistic problems has also been used by Svartvik (1968), Davy and Quirk (1968), Greenbaum (1970), Kempson and Quirk (1970), and Tottie (1971).

The Juhász Experiments. In an attempt to establish the notions on linguistic norms of the ordinary student and pupil, Juhász (1971) gave an Operation and Judgement test to 98 informants. He found in the Judgement Test that the informants had evidently racked their brains to find faults, and even failed what he himself considered to be correct sentences. The concept of "correctness" is, moreover, ambiguous, as it can refer to grammatical correctness, as well as to socially correct utterances, and sentences which are correct according to certain criteria of "truth". Juhász noticed that such considerations had disturbed his informants when giving their verdicts on the sentences.

Intelligibility Testing. Up to now, only isolated investigations of intelligibility have to my knowledge been undertaken. The two error analyses (Engh, 1968, a and b) performed within the UMT-project and discussed on p 23 subsequently formed the basis of an investigation of "tolerance", that is, sentences containing errors were submitted to 150 German students of about the same age as the Swedish pupils who had committed them (Engh, 1971). The "wrong choice of words" was found to block communication to a higher degree than grammatical errors. However, the context in the sentences could sometimes clarify how what in these reports is called a grammatical error should be interpreted. An example of this is the erroneous use of sein instead of ihr in the sentence "Die Frauen benützen den Mann für seine eigenen Interessen" (p 20). The verb benützen leaves no doubt about whose interests are the centre of attention. A comparison with the sentence "Ruth ging ins Theater mit seiner Mutter" instead of ihrer Mutter illustrates the point that where context does not support an interpretation, intelligibility can be completely blocked. The remedy for such cases is to acknowledge that it is the individual sentence that is easy or not to interpret, or to have several instances of sentences of different content but illustrating the same grammatical error.

The First Bournemouth Experiment

Design of the Test. This study adopted the Quirk-Svartvik procedure for informant testing by using two complementary sections in the test. The first section should test the acceptability of the pupils' responses in an Operation Test, and the second section, the intelligibility in an Interpretation Test.

As will be remembered, it was posited that slight deviances (defined as syntactic deviances) would be easier to interpret than more serious deviances (defined as semantic deviances). However, the informants' linguistic behaviour in general could include the syntactic deviances in question, which of course would facilitate an interpretation of them when uttered by others. The acceptability test was intended to check this variable. Also, the use of an acceptability test as well as an intelligibility test made possible a comparison of the informants' verdicts in different test situations.

According to Lyons (1968) an acceptable utterance is "one that has been, or might be, produced by a native speaker in some appropriate context and is, or would be, accepted by other native speakers as belonging to the language in question" (p 137). To Chomsky, an acceptable utterance is "perfectly natural and immediately comprehensible" (see p 6). Earlier acceptability testing has had as test items so called idiomatic mistakes. This study is based on non-native deviances, and, clearly, Lyons' and Chomsky's definitions of "acceptable" are not valid for many of the utterances in the present corpus. As the principles and design of acceptability testing as described in the University College Experiments have been followed, the designation "acceptability" test will be kept, but "acceptable" has in this study rather the meaning given, among others, in The Random House Dictionary (1968) of "meeting only minimum requirements" and "barely adequate" (p 8).

Test Items. The two sections of the informant test consisted of 45 items each. The choice of the items in the test had as a starting-point the types of deviances. Twelve categories of deviances were established as the most common according to Appendix C. (For an enumeration of the categories chosen see Table 16.) Category A represents a slight deviance, while Category L, the last one, contains

the most serious deviance. The categories have consequently been ranked in hierarchical order according to the model for classifying the errors in this study. Within the categories of deviances, the most common deviant utterances were singled out for inclusion in the test. Types of deviances of high frequency are represented by up to six examples in the corresponding category while those of lower frequency have a lower number of examples. To keep the test within the limits indicated by Quirk-Svartvik, who used 100 test items for one test occasion (p 18), the number of deviant sentences was restricted to 36.

Table 16. Types of Deviances Included in the Informant Test

	N	
A. Were + correct form of main verb	3	Sk
B. Non-finite form of "be" + correct form of main verb	2	Ak + Sk
C. Was + regular inflection of irregular verb	6	Ak + Sk
D. Was + other incorrect formations of main verb	4	Ak + Sk
E. Were + regular inflection of irregular verb	1	Sk
F. Non-finite form of "be" + regular inflection of irregular verb	1	Sk
G. Non-finite form of "be" + other incorrect formations of main verb	1	Ak
H. Was + infinitive of main verb	6	Ak + Sk
I. Was + hid	1	Ak + Sk
J. Non-finite form of "be" + infinitive of main verb	2	Ak
K. Was + present participle of main verb	4	Ak + Sk
L. Infinitive of main verb	5	Ak
	36	

Ten of the twelve categories of deviances, that is, A to J, belong to Class II in the classification of errors. Categories K and L belong to Class III.

The deviant utterances chosen for inclusion in the test were to be spoken by a stratified pupil sample. It was considered desirable to have boys and girls, and Ak and Sk represented in about equal proportions. I looked through the transcription of the pupils' responses to find the selected utterances and after due consideration of course, sex, and school class the utterances were located in the original recording and copied into the test tape. Thirty-two different pupils' voices were used (16 boys and 16 girls). They were from 11 of the 12 participating classes, and of the pupils, 16 were from Ak and 16 from Sk.

The consistency of the informants was checked by four deviant test items from the beginning of the test which were again repeated at the end, partly in a different environment. To prevent fatigue, five correct sentences, of which four were in the active voice, were spaced through the test. The guiding principle for arranging the items was that utterances containing the same verb or the same deviance should not occur too near each other. (For the manuscript of the informant test see Appendix D.)

Presentation. This test of 45 items was to be given twice, with the test items in the same order, but with different instructions. The first time the informants were to perform operations on the test items. The second time, they were to correct the items if they thought that they were not formulated according to normal English usage.

As there were no language laboratories for recording the informants' responses in the schools where the test was to be given, oral presentation with written responses was chosen. The informants wrote their responses on test papers which were distributed before the beginning of the test. On the first page of these papers they were to write their age, sex, and the country where they had spent the first fifteen years of their lives.

An instruction spoken by an Englishman preceded the test. I spoke the correct sentences. The advantage of having a presentation from a tape is that if the test is re-administered, test conditions are under control as far as the recording is concerned. An uncontrolled variable is, however, that accoustic conditions differ between school buildings and classrooms. The informants were therefore told to react

if they could not hear well where they were sitting. To offset boredom there was some music for the informants to listen to between the two sections of the test.

Tasks. As tasks to be performed in the Operation Test, negations, questions, and replacements were used. The replacement task included change of pronouns as well as exchange of nouns for pronouns. The choice of an operation task for a certain test item was dictated by the principle that each category should, if possible, take all three kinds of tasks. The replacement task meant the fewest changes of the deviant utterance, and this was deemed most revealing in some cases. Thus, for instance, what were considered to be the most serious deviances, viz., Category L, only took the "replacement" task.

The recommendation of Greenbaum-Quirk to have the task before the test item (p 28) was followed. I spoke the tasks on the tape.

Instructions. In a test battery of this kind, instructions are of the utmost importance. It is stressed by Greenbaum-Quirk that ten practice sentences should be given at the beginning of the test (pp 28-32). In my experiment eight sentences were given at the beginning of the test as practice. Of these eight, five were given orally, and three were introduced both orally and in written form. For the last three test items the informants wrote the responses.

In the University College experiments none of the introductory sentences were deviant. As my test battery differs from their experiments in that the sentences are not only incorrect but also exceptional and strange, and, besides, spoken with anything but impeccable pronunciation and intonation, there was extensive discussion on whether deviant utterances should be used in the practice sentences. A pilot investigation when the test was distributed to seven Swedish university students evidently caused great bewilderment, as demonstrated in a questionnaire afterwards. In answer to the question if they had understood what they were to do, not one of the students said yes, in spite of the fact that they had all plodded away at the test. With this in mind it was decided to have a deviant utterance among the practice sentences and to request the informants twice, not to perform any other changes than those contained in the

instructions. They were also told that the test items were spoken by Swedish school children, and that sentences out of context may sound strange. (See Instruction in Appendix E.)

Timing. The entire test took 42 minutes. In the Operation Test there were 15 seconds after each test item had been read for the informant to write down his response. In the Interpretation Test, there was an equal amount of time for the response.

Administration of the Test. The first GUME informant testing took place in June, 1971, at Bournemouth and Poole College of Art. This particular kind of school was chosen because the students there are fairly representative of the educated community as a whole. As it was the end of the term, only 24 male and seven female students were able to take part in the test. Of these, 26 were between 16 and 20, two between 21 and 25, and three from 31 to 40.

Informants' Comments. No questionnaire was distributed after the test to the students who had taken part. The students commented, however, on the violent contrast between the correct introductory sentences spoken by the Englishman, and the confusing items spoken by the Swedish school children. They also said that nobody today uses the word "sweetheart". A preliminary survey of the answers showed that in the Interpretation Test some informants changed "sweetheart" to "girlfriend" and "lady" to "woman". This is gratifying because it indicates that the students did not realize what was the crucial point in the test.

Scoring Criteria. The sorting of the informants' responses was conducted according to principles adhered to in the Greenbaum-Quirk study (pp 19-25). In the Operation Test the informants' responses were collected under four headings. Number 1 contains the utterances where the operation was performed but no other changes made. In the tables the designation "Compliance" (abbr. C) is used, which indicates that the informants accepted the deviance in question. Heading number 2, "Relevant Non-Compliance" (abbr. RNC) means that the task has been performed, and the deviance of the sentence corrected. Heading number 3 "Omission" (abbr. O) indicates that the informant became so confused by the test item that he could write nothing at

all. Heading number 4, finally, contains all other versions. The heading is called "Other Versions" (abbr. O.V.). These were taken down word by word in notebooks.

Violations of the syntactic and/or semantic features which characterize the category to which the utterance belongs constitute the critical point of the test item. In order to come to grips with the essential matters of the investigation, responses with irrelevant changes were later re-arranged under headings Nos 1 and 2. Thus, for instance, even if the task had not been performed, the response could nevertheless be placed in the RNC-column if the deviance had been corrected. The task had, anyhow, fulfilled a useful purpose in that it diverted the informant's attention from the objective of the test.

In the Interpretation Test the headings corresponding to the four in the Operation Test are: "Compliance" (abbr. C), indicating that the original deviance was repeated, "Correction" (abbr. Cor.) implying that correction of the test item was properly performed, "Omission" (abbr. O), and finally "Other Versions" (abbr. O.V.). In this test, too, there were subsequent re-arrangements of the test items.

Result

Differences in Performance. There were slight differences in informant performance in the Operation Test as well as in the Interpretation Tests. Thus most students would conscientiously respond to all the test items, while one or two could leave the greatest part of the pages blank. (The results for the four columns in the Operation and Interpretation Tests are found in Appendix F.)

Informant Concordance. The five correct sentences in the two sections of the test had the highest figures of all the test items in the Compliance column. There is in this fact an indication of what Quirk-Svartvik call the 'validity' of the evaluation on the part of each separate informant (p 26).

Another control of the reliability and consistency of the informants is exerted by the four deviant test items which were repeated at the end of the test. The figures for the two occasions in the Operation and Interpretation Tests are given below:

Table 17. Repeat Test Items in the Operation Test. N = 31

No	2	44	3	45	5	43	15	40
C								
RNC	11	28	8	11	5	5	6	13
O	15	2	22	17	22	23	25	16
O.V.	5	1	1	3	4	3		2

(C = Compliance, RNC = Relevant Non-Compliance, O = Omission, O.V. = Other Versions)

The inconsistency in the treatment of test item No 2 on the first and second occasion might be an effect of practice. There is, however, exact concordance among the informants not to accpet the test items on any occasion as correct, a strong evidence of reliability. Moreover, in items 5 and 43 the result is almost identical on the two occasions, while, incidentally, the immediately surrounding test items are different.

The impression of consistency in the informant evaluation is strengthened by a comparsion of the scores for the corresponding pairs of items in the Interpretation Test (Table 18).

Table 18. Repeat Test Items in the Interpretation Test. N = 31

No	2	44	3	45	5	43	15	40
C								
Cor.	30	31	21	23	8	5	20	19
O	1		9	8	2	2	11	12
O.V.			1		21	24		

(C = Compliance, Cor. = Correction, O = Omission, O.V. = Other Versions)

Table 18 bears out the surmise that the Interpretation Test should have higher figures in the column for corrected sentences and lower in the Omission column than the Operation Test. The reason for this is that in the Operation Test there are higher demands on the

informants' performance. The difference in scores for the pairs of items is in Table 18 negligible. As in the Operation Test, there is complete agreement that none of the test items is acceptable. In short, informant consistency seems satisfactory.

Results for the Tasks. Doubts had been expressed whether the task "Negation" was not altogether too cryptic a stimulus for English students (personal communication from Professor Randolph Quirk). To check the outcome when the three tasks "Negation", "Question", and "Replacement" were used, a survey of the sentences in the RNC column was undertaken. Unfortunately the misgivings proved to be well-founded (see Table 19).

Table 19. Percentage of Entries in the RNC Column for the Different Tasks. N = 31

Negation	39.5
Question	51.2
Replacement	49.5

Correspondence Between Operation and Interpretation Tests. In order to illustrate the relationship between the columns of the two sections of the test, Tables 20 and 21 were drawn up. The scores for the repeat test items as well as for the control sentences are not included in the tables below.

Table 20. Result in Per Cent for the Operation Test. N = 31

C	RNC	O	O.V.
1.34	47.04	38.44	13.17

(C = Compliance, RNC = Relevant Non-Compliance, O = Omission, O.V. = Other Versions)

Table 21. Result in Per Cent for the Interpretation Test. N = 31

C	Cor.	O	O.V.
0.09	69.09	19.71	11.11

(C = Compliance, Cor. = Correction, O = Omission, O.V. = Other Versions)

A look at the above tables makes it clear that the correspondence is greatest in the Compliance and Other Versions columns in the two sections. The Omission column has, not unexpectedly, twice the sum on the first occasion as compared to the second (see p 64).

A rank correlation was calculated for the RNC and Correction columns. The results of the repeat test items and the correct sentences were not included. As the low scores for the test items with the task "Negation" would have a distorting effect on the results in the RNC column, they were disregarded. On the basis of the remaining data the correlation was found to be .69, which under the premises of this investigation is satisfactory and a guarantee for the fact that continued work with comparisons between the Operation and Interpretation Tests is meaningful.

Comments on Intelligibility. A discovery which may come as a surprise to many teachers is that in spite of the fact that the Englishmen agreed almost unanimously that the test items were unacceptable, they nevertheless understood nearly 70 per cent of what the Swedish pupils said. If the very sentence which the pupil should have said is insisted upon, that is, if no utterances with irrelevant changes in tense, etc., are accepted, the figure reaches 60 per cent. That the intelligibility is so high is the more surprising as context and extralinguistic features which in normal conditions facilitate the understanding of sentences, were totally absent in the testing situation. Furthermore, there were disturbing factors, such as strange pronunciation and background noises.

It is, in truth, provoking that correctness is of such minor importance in the communication situation. It would not be an exaggeration to say that the marking system in Swedish schools, as far as the subject of English is concerned, is founded more on an estimate of the pupil's ability to produce correct sentences than on his writing and speaking intelligible utterances. For practical reasons, the ordinary teacher cannot be expected continually to submit the result of his pupils' oral and written efforts to native Englishmen in interpretation tests. The findings in the first experiment of this study indicate, however, that a change of attitude from stressing correctness to considering communicativeness in speech and writing of the learner's performance would not be amiss.

The October Experiments

The June version of the informant test was again relayed in October to 38 students at Bournemouth and Poole College of Art.

Besides, a revised version of the test was in October given to 50 students at Derby College of Technology. In the new edition of the test, I read the instructions and all the test items. It was considered possible that the informants would be more vigilant from the very beginning of the test if they heard that a non-native person was speaking, and not, as in the first version, relax happily during the instructions spoken slowly and agreeably by a native Englishman, and then be violently shocked by the Swedish pupils' deviant sentences. The task "Negation" was replaced by the imperative "Make the sentence negative", and an extra practice sentence with this task was added to the eight earlier practice sentences.

Comparison of the Two Bournemouth Tests. In the second experiment at Bournemouth 27 male and 11 female students took part. The proportions between the sexes are similar to those of the first experiment, when the figures were 24 male and 7 female students. The average age is in the first and second experiment 19 and 20 years respectively. The students are also comparable as far as choice of future profession is concerned. As the students listened to the identical tape on the first and second test occasions, a combination of the results seems recommendable.

As to the results on the two occasions, it is evident that both groups of students only very isolatedly repeated a deviant utterance in the Operation or the Interpretation Test. The correct sentences consistently had very high figures in the Compliance column. The task "Negation" had the lowest percentage for success on the two occasions, and "Question" the highest. As mentioned earlier, the first group interpreted correctly about 70 per cent of the utterances in the Interpretation Test (p 65). In the second group the figure is about 80 per cent. The rank correlation calculated for the RNC- and the Correction columns was in the first experiment .69 and in the second .67, which both guarantee a satisfactory agreement between informant usage and interpretation capacity.

There are, however, also discrepancies between the two groups. An overall impression of proportionately higher figures in the RNC- and Correction columns on the second occasion is inescapable. This dissimilarity is not considered to distort the result of a conflation of the results of the two Bournemouth groups. (For a detailed account of the results for the Bournemouth 2 Experiment and the conflation see Appendices G and H.)

Results of the Conflated Bournemouth 1 and 2 Experiments

The conflated results of the Bournemouth experiments is accounted for below:

Table 22. Scores in Percentages for the Operation Test. N = 69

Compliance	RNC	Omission	Other Versions
1.4	54.4	31.2	13.0

Table 23. Scores in Percentages for the Interpretation Test. N = 69

Compliance	Correction	Omission	Other Versions
0.4	74.9	14.2	10.5

As in the first experiment, the columns which undergo the fewest changes from the Operation to the Interpretation tests are "Compliance" and "Other Versions". In all the experiments of this study the Correction column has higher figures than the RNC column. The "Omission" column also has consistently lower figures in the Interpretation test than in the Operation test.

The result in the Correction column indicates that nearly 75 per cent of the deviant utterances were fully intelligible to the informants. As 69 native Englishmen took part in the Bournemouth experiments, this figure carries a certain weight.

A rank correlation calculated for the conflated RNC and Correction columns amounted to .77. As some latitude must be allowed for, owing to the different situations in the two sections of the test, the correlation testifies to a positive correlation between the RNC- and the Correction columns.

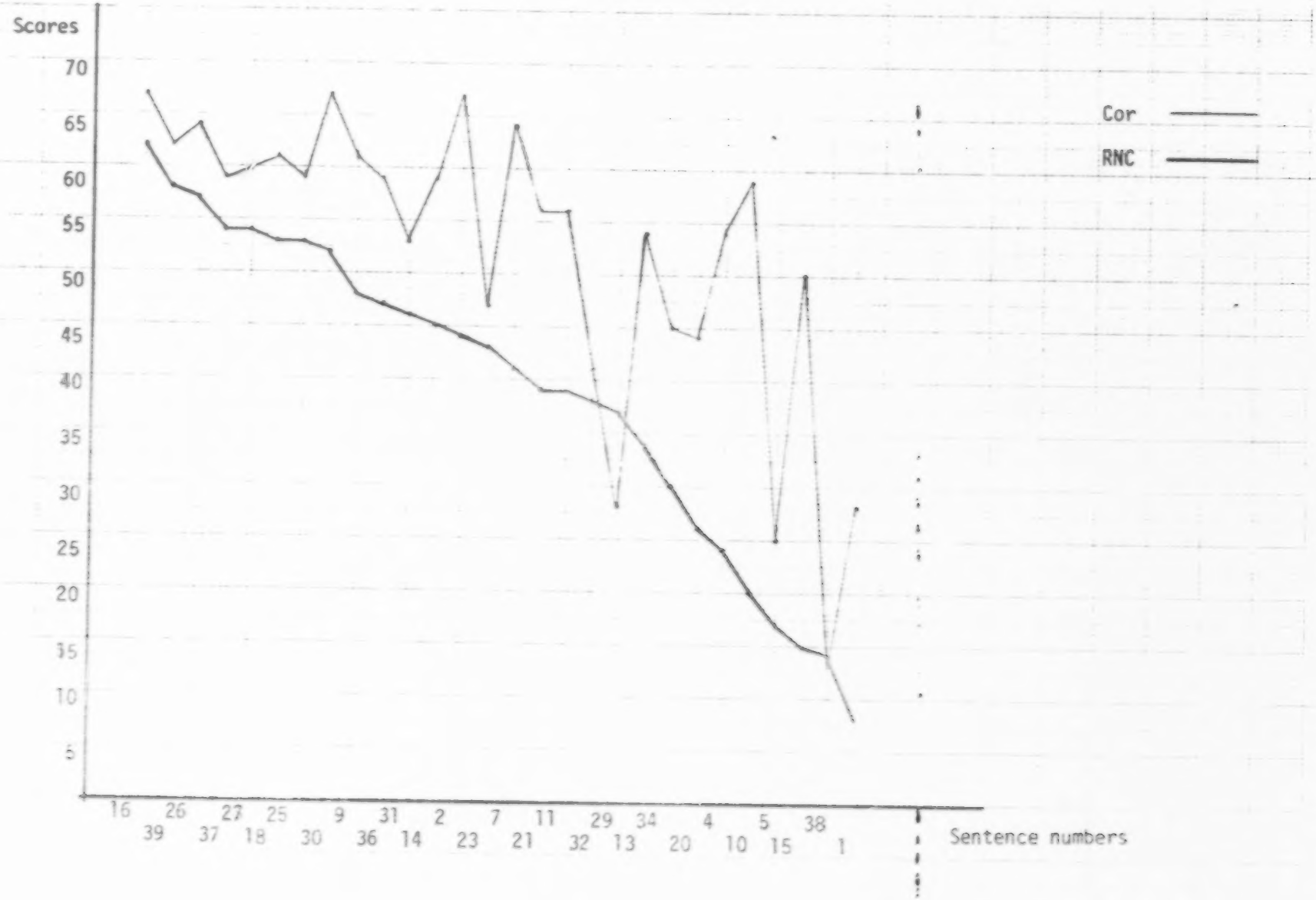
Results for the Repeat Test Items. In the conflated test results, the scores for the repeat test items were consistently higher in the Interpretation Test than in the Operation Test. Moreover, they were almost identical for the paired test items 5 and 43. It happened once in 138 possibilities that the informants repeated a deviant sentence. Thus, the results agree to a very high extent with those obtained for the Bournemouth 1 Experiment (see p 64).

Result for the Individual Test Items. The results for the individual test items in the RNC and Correction columns can be studied in Figure 2. The test items in the RNC column were plotted from those with the highest scores to those with the lowest. (The results of the items with the Negation-task were disregarded.) The scores for the corresponding items in the Correction column were then filled in. The descending course of the curve in the RNC-column, which is also perceptible in the Correction column, illustrates the decreasing acceptability and intelligibility of the test items. As could be expected, the Correction-line is in general above the RNC-line. There are considerable differences for a few items in the two different tests. The most polarised items will be the object of special attention later on (p 75).

Category order Reflected in Scores of the Test Items. In the following discussion the distribution of the categories as a result of the plotting in Figure 2 will be scrutinized. If my hypothesis (see p 8) about the relationship between degree of deviance and degree of acceptability and interpretability is to be confirmed, the first categories should occur mainly among the highest scores, while the last categories ought to be found in the test items with the lowest scores.

Test item No 1 (Category C) had in the Operation test the lowest score of all the items, that is, eight successful responses of 69 possible in the RNC columns. As it was the first deviant utterance the informants heard, this could have contributed to the failure. The high figure of 36 in the Omission column speaks for this fact. There are, however, other possible ways of explaining the result. The original test item ran: *"He was bited by the angry dog". The most frequent interpretation in the Other Versions column was for this

Figure 2. Success of the Individual Test Items Excluding Those With the Task "Negation". N = 69



sentence: "He was frightened by the angry dog." This could be an auditory lapse, but most probably the informants reinterpreted the sentence in a way that seemed plausible to them, a phenomenon which Quirk-Svartvik also met with (p 82).

There were 36 test items in the test. If those with the task "Negation" and the first item with the exceptionally low score are removed, 27 items remain. These 27 items were divided into three groups, from the highest to the lowest scores of success, and the distribution of categories within the three groups was then established. The result is shown in Table 24.

Table 24. Category Order Reflected in the Scores of the Test Items

Item	Category	Item	Category	Item	Category
16	J1	36	H5	29	L4
39	F1	31	C5	13	C3
26	D3	14	I1	34	K4
37	C6	2	H1	20	B2
27	J2	23	L3	4	L1
18	H3	7	B1	10	K2
25	H4	21	C4	5	K3
30	A3	11	G1	15	L2
9	D1	32	D4	38	L5
(Scores from 62 to 48)		(Scores from 47 to 38)		(Scores from 37 to 14)	

Even if the only item from Category A is within the first group, it is obvious that Group 1 does not chiefly include items from the first ones of the twelve categories. Moreover, items from Category C are to be found in all three groups. A study of the third group is, however, very revealing. There three of the four K-items and four of the five L-items have ended up. Categories K and L represent very serious deviances, and there is an obvious connection between this fact and the informants' reaction. There is thus here some confirmation of the hypothesis underlying the hierarchical scale of errors in the error analysis; but other reasons than slight or serious deviance, as is plain from the treatment of test item No 1, can to all appearences influence the informants' verdicts.

The Correction column was also taken as a basis for plotting the test items from those with highest to lowest scores. All 36 test items were included. The result was not very unlike that of the RNC column. An account of how the categories were distributed among the scores follows below:

67 points: A3, H1, J1
65 points: C2
64 points: B1, D3
63 points: E1
62 points: F1
61 points: D1, H3
60 points: J2
59 points: C6, K2, H4, H5, I1
56 points: C4, G1
55 points: H2
54 points: C3, L1
53 points: A1, C5, K3
50 points: L2
49 points: H6
48 points: D2
47 points: L3
45 points: K4
44 points: B2
41 points: D4
28 points: C1, L4
25 points: K1
18 points: A2
13 points: L5

(The K- and L-items have been underlined.)

Categories A, C, and H have a good spread among the scores. The K-category, and to a still higher degree the L-category, does not score high figures.

Relationship of the Categories in the Two Tests. To display the relationship of the categories in the Operation and the Interpretation Tests, the test items were arranged in category order in Figure 3 a and b.(Test sentences with the negation task and the corresponding

Figure 3a. Scores for the RNC- and Correction Columns in Category Order. N = 69

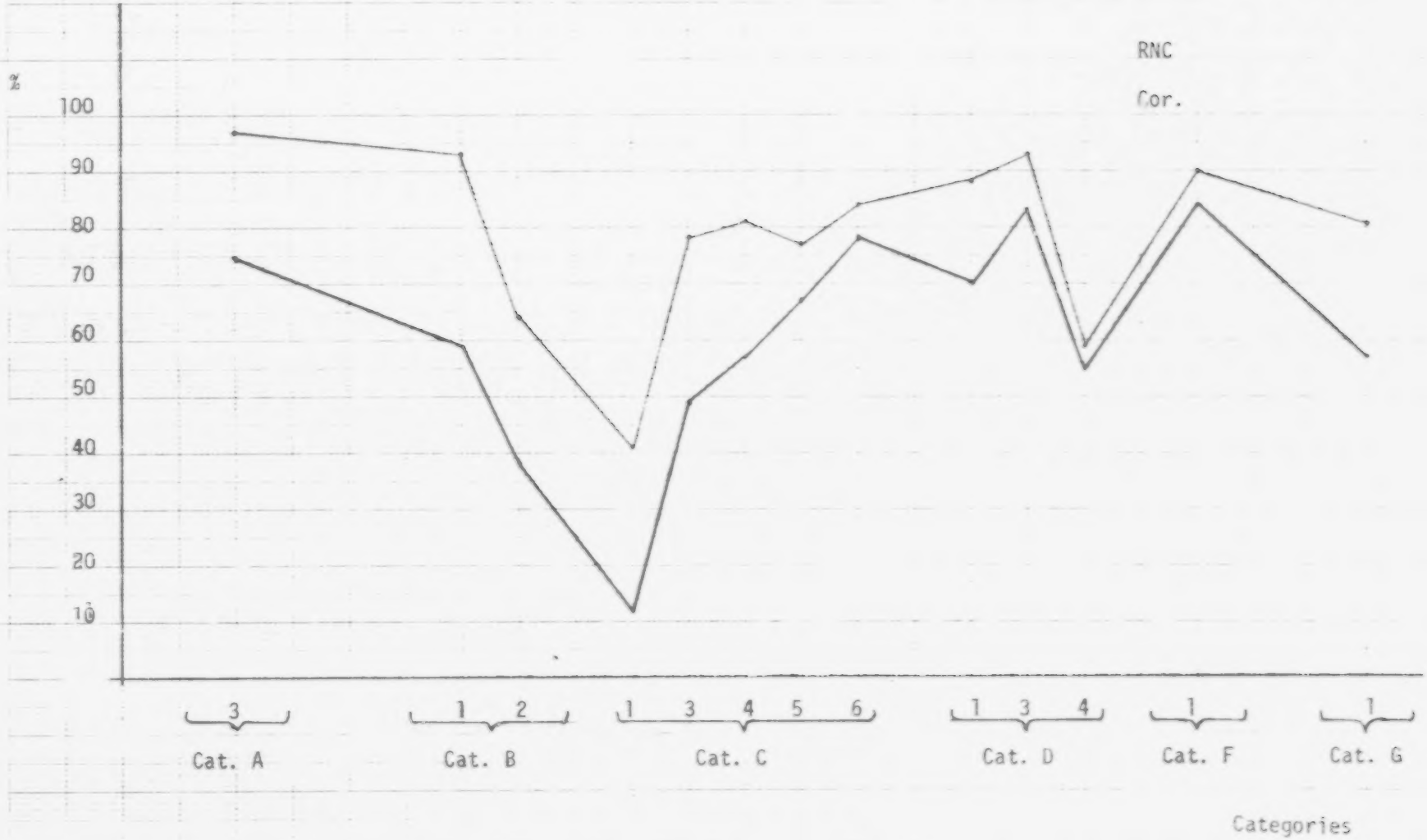
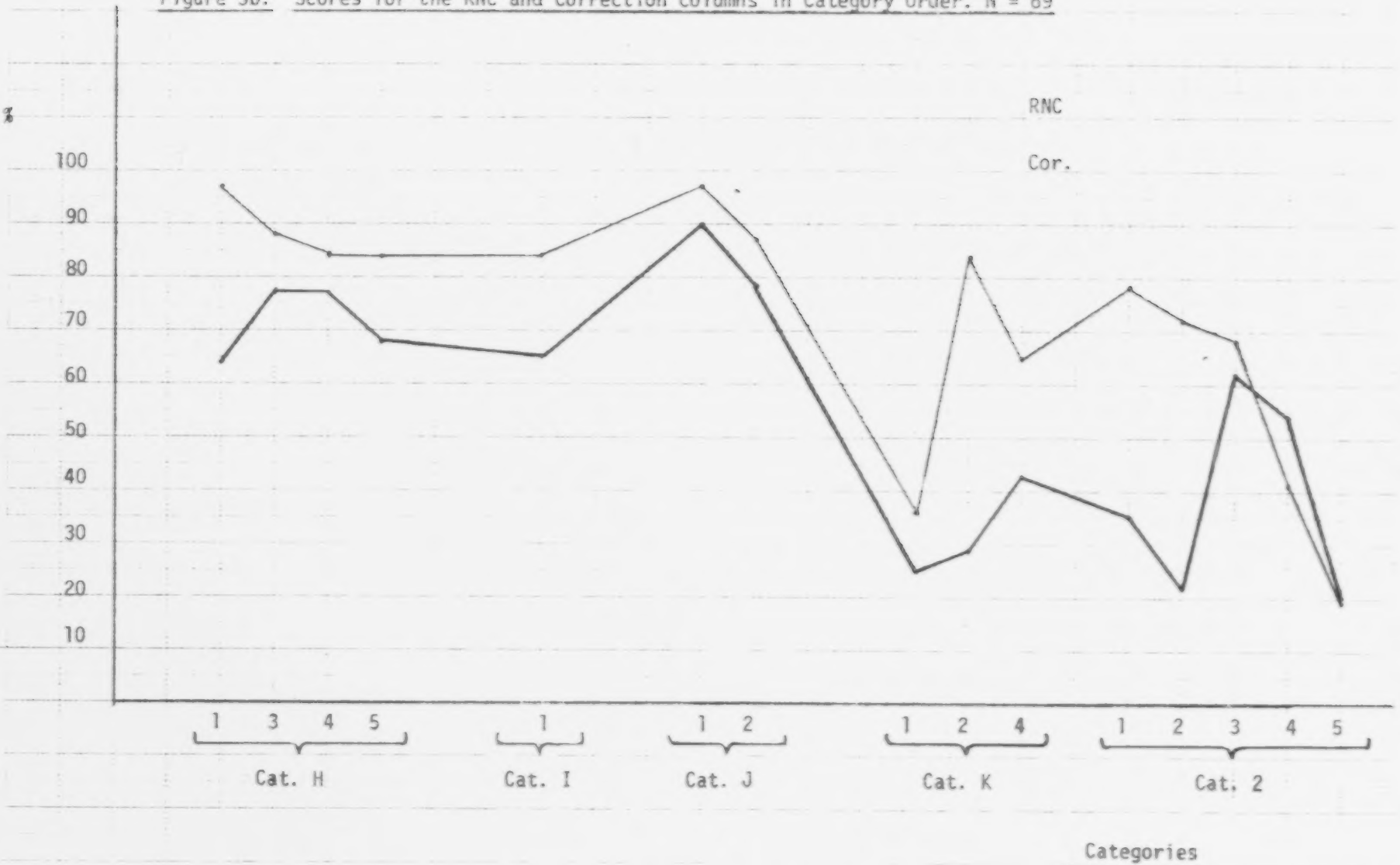


Figure 3b. Scores for the RNC and Correction columns in Category Order. N = 69



items in the Interpretation test were not included.) The results are given in per cent. (See Appendix J.)

Figure 3a & b shows that only on two occassions does the Correction column have lower scores than the RNC column. This occurs within the L-category which, according to the scale of deviances used here, represents serious, that is, semantic deviances.

With the negation tasks removed, no category holds more than five items. It is, however, first and foremost in the larger categories that a distinct result profile can be observed. Categories B, D, and J display similar either downward or upward tendencies; in Category C there are for four of the five items similar movements, while the curves for Categories H, K, and L have disparate trends. The relationship of the categories is thus not consistently the same in the two tests.

In order to further survey the agreement between the two tests, the test items were redistributed in Figure 4 according to similarity in result profiles. The widest gap between the respective pairs of test items in the RNC and Correction columns was in Figure 4 not to exceed 30 per cent. The items were arranged in ascending order based on which of the paired scores was the lower.

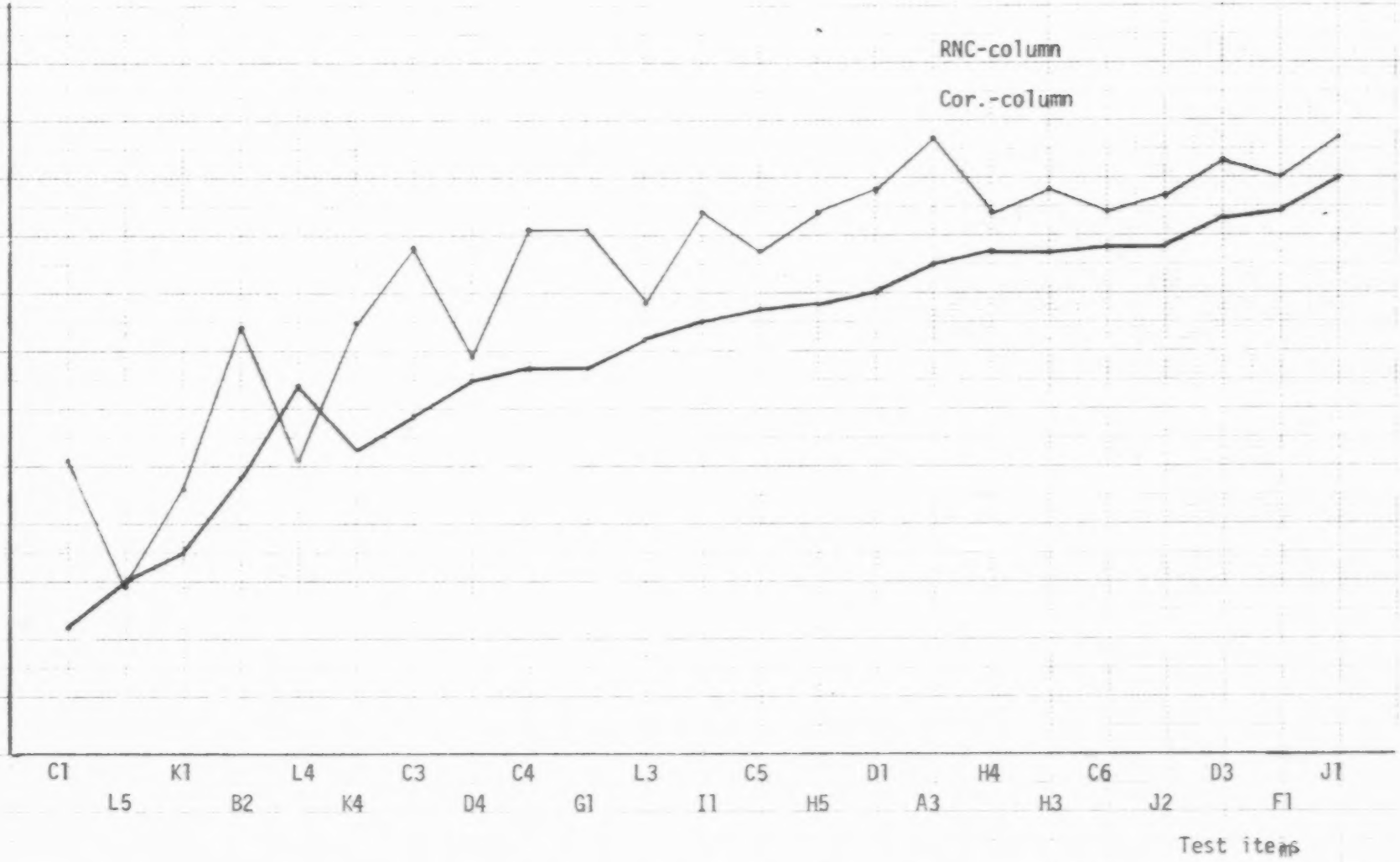
Twenty-eight test items remain when the items with the negation task are disregarded. Only five of these 28 items had a wider gap than 30 per cent, which is evidence of a fairly close agreement between the two different tests.

Below the five test items with a wider gap than 30 per cent in the two tests are enumerated. They obviously fall into two groups:

Cat.	Diff.		
K2	55 %	X The man was meeting by his sweetheart	(from 20 to 58 scores)
L2	50 %	X He tell to work more by his teacher	(from 15 to 50 scores)
L1	43 %	X It wash and look like new	(from 24 to 54 scores)
B1	34 %	X It been washed and looked like new	(from 41 to 64 scores)
H1	33 %	X He was catch by the policeman	(from 44 to 67 scores)

The first group consists of items from categories K and L. As will be remembered, two L-items, L4 X"The money hide under the bed" and L5, X"The man meet his sweetheart" had in the Correction column lower

Figure 4. RNC- and Cor-scores: Result Profiles. Gap between RNC and Cor. $\leq$ 30 %. N = 69



scores than in the RNC column (p 70). Within the same category, there are also two items, L1 and L2, where the scores increased substantially from the RNC occasion to the Correction occasion. One of these items, L2, has, however, an agent which can have put the informants on the track of what was the intended sentence. The second L-item, L1, where progress was great, has, on the other hand, no agent but the verb "wash" represents a special case as it is a middle verb. Probably the fact that it can occur in active form with passive meaning made the utterance easy to interpret.

The K-item, which has the widest gap in the first group, was evidently difficult to handle in the Operation Test, but the presence of the agent may have facilitated an interpretation, just as with test item L2. The conclusion which can be drawn from the result of test items K2 and L2 is, consequently, that apparently a flagrant syntactic deviance can give the informant a hint about how a semantically deviant sentence should be interpreted.

The differences in result for the L-items discussed above explain why the relationship of the categories in the RNC- and Correction columns as displayed in Figure 3 b fluctuated (p 74).

The second group of items in the enumeration is only slightly above the 30 per cent limit. The results differ from those of the first group in that the RNC column has much higher figures. In the Correction column the scores reach 64 and 67 points respectively, which testifies to the fact that these test items are not so difficult as items from the K- and L-categories, which never reach 60 points in the Correction column.

The Practice Effect - A Skewing Effect? Even if the five dummy sentences introduce new structural and lexical material among the test items, a great diversity in sentence content does not exist in this informant study, as there are only nine sentences in the oral criterion on which it is based. The important question which necessitates an answer is consequently: Did the informants grasp as the test progressed that the passive voice was the special grammatical problem in the test items?

It is a well-known fact that testees as a rule have a better result when they do a test for the second time (Anastasi, 1958, p 199). This was also the case in this study, which is clear if the Operation and the Interpretation Tests are compared (p 68). This fact is not considered to jeopardize the reliability of the test, however, as in the Correction column the scores for two test items (Nos 29 and 38) were lower than in the RNC column. Thus, when the informants, towards the end of the test, heard these test items for the second time and, when, besides, the demands on their performance were lower than on the first occasion, they nevertheless scored lower figures. This was not caused by fatigue, as the remaining seven items of the test have higher figures in the Correction column than in the RNC column.

The Derby Experiment

In the October experiment at Derby 50 students from Derby and District College of Technology took part. They consisted of Higher National Certificate civil engineers, Higher National Diploma electrical engineers, and mechanical engineering technicians. They were only male students with an average age of 21 years.

Results. The result of the Derby experiment differs very much from that of the Bournemouth experiments (Tables 25 and 26). It had been the exception rather than the rule for the Bournemouth students to repeat the deviant utterance while performing the task in the Operation Test. At Derby is happened frequently. That the students at Derby had set about the work in a serious manner is demonstrated by the fact that the Omission column is, comparatively speaking, strikingly empty. In the Interpretation Test, the Correction column has the highest scores found in any of the three experiments (see Table 26). It was consequently not ignorance which made the students repeat the deviant utterance in the Operation Test. The so called 'validity' of the informants is demonstrated by the result of the dummy sentences which have the highest scores of all the test items in the Compliance column (see Appendix I).

Table 25. Scores in Per Cent for the Derby Operation Test. N = 50

Compliance	RNC	Omission	Other Versions
38.6	38.1	5.9	17.4

Table 26. Scores in Per Cent for the Derby Interpretation Test. N = 50

Compliance	Correction	Omission	Other Versions
1.9	90.4	1.3	6.2

The divergent results in the Bournemouth and Derby experiments were probably due to one reason. A native is said to react to a speaking situation as a whole and not to give attention to irrelevant elements. Rivers (1964) when discussing this phenomenon says: "In our own language, our understanding of what is aurally presented is largely guided by well-established word associations, familiar syntactic structures which lead us to expect certain classes of words in certain positions, so that if we do not hear clearly, we can frequently supply what is missing from the cues given by the context" (p 105). The confusing pronunciation of the pupils and the varying background noises in the recording used at Bournemouth gave the informants ample opportunity to use their previous linguistic experience when decoding what they heard.

The deviant utterances in the Derby experiment, on the other hand, were distinctly enunciated and had, furthermore, been recorded in a studio. No background noises could thus explain away or veil the deviances. The Derby informants could not doubt what they heard, and they conscientiously took down many of the deviances according to instructions.

There is another difference between the Bournemouth and Derby students. At Derby, nobody exchanged "sweetheart" for "girlfriend" or "lady" for "woman" in the Interpretation Test. However, a few students at Derby, too, wrote "fuzz" instead of "policeman".

Operation Tasks. In the Derby experiment the task "Negation" was changed to "Make the sentence negative". As mentioned previously (p 67), the negation task had the lowest figure for success in the

two experiments at Bournemouth, while the question task had the highest. The reformulated negation task used at Derby, however, had the next but highest figure. The question task thus has in all three experiments the highest scores (see Table 27. Nota bene, the basic data for the table below is from the Compliance column and the RNC column).

Table 27. Demonstration of Scores in the Three Types of Tasks at Derby. N = 50

Negation	Question	Replacement
%	%	%
77.8	91.4	71.3

Category Order in the Interpretation Test. The result of the Derby experiment is interesting, but the divergence from earlier findings at Bournemouth means that only the Interpretation test can be used in a comparison.

There was for most test items in the Derby experiment no great difference in result. The highest possible score is 50, and 32 of the 36 items score from 50 to 45 points. Two items have 43 points (G1, H2). Of the remaining two, one has 28 points (L1) and one 5 (L5). Category L, which in the Bournemouth experiments proved to be fairly intractable, is in the Derby study apparently also a hurdle. Below follows an enumeration of how the categories were distributed in the Derby scores:

50 points: C2, H1
49 points: B2, C4, K1
48 points: A2, A3, B1, C3, D3, E1, F1, H3, H5, H6, L2
47 points: A1, D4, K3, K4, J1, J2
46 points: C6, K2, H4, L3
45 points: C1, C5, D1, D2, I1, L4
43 points: G1, H2
28 points: L1
5 points: L5

(The K- and L-items have been underlined.)

If the result of the Interpretation column in the conflated Bournemouth result (see p 72) is compared to the corresponding Derby result, it is found that in both experiments test item No 38, that is, L5, X"The man meet his sweetheart" has the lowest result. It was observed in the Bournemouth result (p 77) that the presence or absence of an agent in the L-items could, respectively, promote or bar understanding. The observation is confirmed in the Derby result. Items L1, L4, and L5, which have no agents, score the lowest figures among the five L-items.

There are two items in the test where a lexically incorrect word occurs, that is, D2 X"The man was mit by his sweetheart" and G1 X"He be beat by the angry dog". It was hypothesized (see p 8) that such utterances would be difficult to interpret, and that this was the case is evident in the fact that the scores for these items are at a certain distance from the top results in both experiments.

C1 was the first item in the Interpretation Test. It scored only 28 points of 69 possible in the Bournemouth experiment (see p 72), and a comparatively low figure, too, that is, 45 of 50 points in the Derby results.

Other similarities in the Bournemouth and Derby result exist both for individual test items and for categories. In both experiments the items H2, X"He was catch by a policeman" and C2, X"He was ['kaetʃid] by the policeman" had exceptionally high figures. It does not seem that in either of the two experiments an auxiliary and a main verb both syntactically incorrect block communication to any great extent, judging from the figures scored by Category E, X"He were ['kaetʃid] by the policeman", Category F, X"He been [kaetʃt] by the policeman", and the items in the J-category, J1: X"He been catch by the policeman" and J2: X"He been bite by the angry dog".

Discrepancies in the result of the Bournemouth and Derby studies could be expected, as not even the same population would have behaved exactly alike on two repeated test occasions. Moreover, the high figure in the Derby Correction column (90.4 %), as compared to the corresponding column in the Bournemouth conflated results (74.9), implies that the revised edition of the test contributed to better comprehension of the test items, something which must appear in the scores for the separate items.

The least serious deviances were considered to be utterances where only the auxiliary was incorrect. For the A-category the deviance consisted of incorrect number and for the B-category the use of non-finite forms of the auxiliary. In the Derby experiment, the A-items scored 48 and 47 of 50 possible points, and the B-items 49 and 48 points. This outcome is a confirmation of my hypothesis. In the Bournemouth result only A3 *"He were told to work more by his teacher" and B1 *"It been washed and looked like new" had high figures for success (67 and 64 respectively). Items A1 and A2 scored 53 and 18 points, while B2 has 44 points. It is clear however, from the result of item E1 (with 63 points) and item J1 (with 67 points) that "were" or "been" instead of "was" were not, even in conjunction with a syntactically incorrect main verb, difficult to interpret. When failure to interpret the A and B utterances occurred, this must have been due to the special recording conditions in the Bournemouth experiment. The result for A1, A2, and B2 is for this reason not considered to invalidate my hypothesis.

To facilitate a survey of the results at Bournemouth and Derby, the test items and the scores were rearranged so that it is clear how the syntactic, lexical, and semantic errors are distributed among the scores.

Table 28. Distribution of Types of Errors at Bournemouth. N = 69

		Types of Errors	
Scores	Per Cent	Syntax	Lexis and semantics
67	97	A3, H1, J1	
65-58	94-84	C2, B1, D3, E1, F1, D1, H3, J2, C6, H4, H5, I1	K2
56-50	81-72	C4, H2, C3, A1, C5	L1, G1, K3, L2
49-41	71-59	H6, B2, D4	L3, K4, D2
28-13	41-19	C1, A2	L4, K1, L5

Table 29. Distribution of Types of Errors at Derby. N = 50

		Types of Errors	
Scores	Per Cent	Syntax	Lexis and Semantics
50-49	100-98	C2, H1, B2, C4	K1
48-47	96-94	A2, A3, B1, C3, D3, E1, F1, H3, H5, H6, A1, D4, J1, J2	L2, K3, K4
46-45	92-90	C6, H4 C1, C5, D1 I1	K2, L3, D2, L4
43	86	H2	G1
28-5	56-10		L1, L5

In the Bournemouth result the lexical deviances and the semantically deviant utterances (items D2 and G1 and categories K and L) score from 58 to 13 points. The centre of gravity for these items is, however, on the low scores.

As seen in Table 29 the picture is not so distinct at Derby. There is an inclination for items D2, G1, and the L-items to score low figures, but the K-items, representing a very serious deviance, are not found among the low scores, and K1 even reaches 49 of 50 possible points. All the K-items consist of the main verb in the progressive form followed by the preposition "by". It was noticed earlier (p 81) that an agent in the L-items, notwithstanding the fact that it rendered the utterance preposterous, could, nevertheless, be instrumental in a successful interpretation. This may also be valid for the K-items, but the question remains why this circumstance did not facilitate comprehension of the K-items in the Bournemouth study to an equal degree. It does not seem realistic to blame the low scores for all the four K-items on inarticulate performance on the part of the pupils, even if the result for item K1, which belongs to the lowest group in Table 28 and to the uppermost in Table 29, hints at this possibility. That for this item the Bournemouth students only imperfectly caught what was said on the tape is borne out in the Other Versions column. K1 which runs, X"He was biting by the angry dog" was emended to "He was

frightened by the angry dog" (35 instances), "He was fighting with the angry dog" (2 instances), and "The dog frightened him" (1 instance). No such emendations exist in the Derby result. For the remaining K-items in the Bournemouth result, the informants either did not find immediately applicable emendations, or the pronunciation was perhaps better, as the scores are about twice as high for K2, K3, and K4 as for K1. The manifest difference in result for the K-items in the Derby and Bournemouth results in general, however, remains an unsolved problem.

The low result for items C1 and A2 in Tables 28 and 29 has been commented on (pp81 and 82). If they are left out of account, it is found that utterances with syntactic deviances only are totally absent in the lowest score group at Bournemouth as well as at Derby. There is in this fact a confirmation in broad outline of the hypothesis.

The Streamlined Hypothesis

In the Bournemouth and Derby studies there are signs that the hierarcical scale of deviances hypothesized for this study needs some rearrangement. This rearrangement, however, must be based on directions of difference and intuition rather than on unequivocal results.

The original hypothesis set up a scale of five degrees of deviance (p 9). The first type has one syntactic deviance, and the second, two syntactic deviances. The deviances in the three following types are semantic in character. Type 3 contains a word lexically incorrect, while types 4 and 5 consist of utterances contextually incongruous. In addition, type 5 also has syntactic deviances.

The results of the Bournemouth and Derby revealed that it did not matter much if a syntactic deviance occurred in the auxiliary or in the main verb, or in both. These types of deviances were all fairly easy to interpret. These three possibilities were therefore lumped together, which means that types 1 and 2 in the original scale form one combined group in the amended scale of deviances.

The informants' verdicts further revealed that utterances with both semantic and syntactic deviances could sometimes be easier to interpret than utterances only semantically incorrect. This is because some syntactic deviances were found to enhance intelligibility.

My original hypothesis was in essential parts confirmed, but there are reasons for a few adjustments. Below follows the reorganized scale of degrees of deviances.

1. Syntactic deviances

   A. Incorrect auxiliary
   B. Incorrect main verb
   C. Incorrect form of both auxiliary and main verb

2. Lexical deviances

   (This heading includes cases where instead of the proper main verb a form which can lead to misunderstandings or confusion is used. Examples are: *"mit instead of "met" and "beat" instead of "bitten").

3. Utterances with semantic as well as syntactic deviances

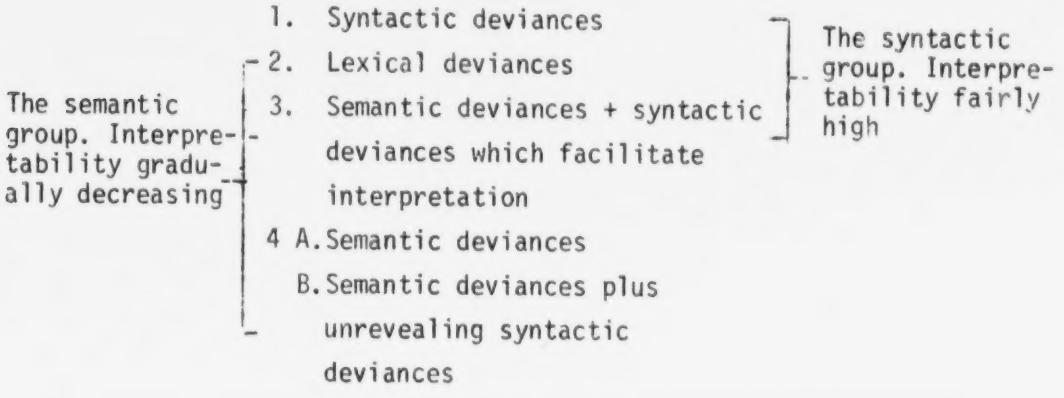
   (This heading includes utterances inappropriate in a given situation, but in which a syntactic deviance gives a clue to the intended message. An example of this is *"He was meeting by his sweetheart", where the presence of "by" evidently helped the informant to interpret the utterance as "He was met by his sweetheart").

4. A. Semantically deviant utterances
   B. Utterances with semantic as well as syntactic deviances

   (Under this heading the utterances which very few informants interpreted correctly are to be found. Both A and B comprise sentences which are contextually incongruous as, for instance, "He was catching the policeman" when the response should have been "He was caught by the policeman".

The B utterances also have syntactic deviances, but, in contrast to items under heading No 3, these deviances do not facilitate the comprehension of the utterance. An example illustrating this is the response: x"He were biting the angry dog" when the picture the pupil saw should have made him say: "He was bitten by the angry dog").

The drawing below illustrates in a schematic way the scale of deviances:


1. Syntactic deviances
2. Lexical deviances
3. Semantic deviances + syntactic deviances which facilitate interpretation
4 A. Semantic deviances
B. Semantic deviances plus unrevealing syntactic deviances
The semantic group. Interpretability gradually decreasing
The syntactic group. Interpretability fairly high

Sentences discussed under 3 and 4B would very probably receive the same treatment in Swedish schools as regards marking. Nevertheless, it is clear from the informant test that utterances belonging to 4A and B are much more difficult to interpret than utterances under heading No 3. Obviously, the profession could gain much from insights into the intelligibility of different deviant utterances.

In continued work with informant experiments this rearranged hierarchical scale will be put to the test.

Conclusion

The palpable similarities for some of the items and categories of deviance in the Bournemouth and Derby results are an indication of informant reliability as well as of the generalizability of some of the findings of this study. To these belong the very high intelligibility of the deviant utterances, an important discovery, which may surprise many people.

The design of my informant experiment was highly tentative, as acceptability testing had earlier been based on native deviances, while, in the case of intelligibility testing, the test items had been administered in written form. The Bournemouth version of my informant test may have entailed that imperfect delivery of the deviant utterances, and not the deviances they represent, can have influenced the result. In the Derby experiment the narrow spread of the majority of the test items makes it difficult to discern precise differences for the test items.

In sum, this study gives valuable information on the intelligibility of non-native deviant utterances and hints about what a scale of deviances set up on the basis of success in communication should look like.

SUMMARY AND CONCLUSIONS

Summary

This study describes the continuation of one of the GUME-experiments. It has two aims, first, to classify errors made by Swedish pupils in an oral test (henceforth called the "oral criterion") and, secondly, to try to establish in an informant investigation whether or not a group of students in England could accept and/or understand what the Swedish pupils said.

The oral criterion deals with the same grammatical problem, that is, the passive voice, as the test battery given as pre- and post-test in the GUME 5 study. It was administered in the spring of 1970 to 247 pupils, aged about 14, from twelve classes representing eight different schools in Gothenburg.

The classification of errors ranked the deviant sentences hierarchically from those which were only slightly deviant to those which were considered seriously deviant. Syntactic errors belong to the former group, while semantic errors, that is, sentences contextually out of place, belong to the latter group. The error analysis showed that the test items containing irregular verbs had more errors as well as more serious errors and more types of errors than the regular verbs. Errors were less serious and fewer both in type and frequency in the more difficult course of English instruction than in the easier one. Systematic errors far exceeded random errors in number.

The hypothesis was formed that semantically incorrect sentences would block communication to a greater extent than those which were syntactically incorrect. This hypothesis was in essence confirmed in an acceptability and intelligibility test based on the 12 most frequent types of errors in the oral criterion.

The informant investigation involved 69 students at Bournemouth and Poole College of Art and 50 students at Derby and District College of Technology. Two editions of the informant test were used. In the first, the original deviant responses, made by the pupils during the oral test, were copied into the informant test. In the

second edition, I spoke the same deviant utterances. The difference between the two editions is, consequently, that on the second occasion there is a fairly normal intonation of the utterances and no background noise. In each edition of the informant test, the 45 test items were given twice, but with different instructions. The first section was called the "Operation Test" because when the informants heard the test for the first time, they were to perform operations on the deviant utterances. They were told explicitly not to make any other changes. The second section of the test is called the "Interpretation Test". When the informants heard the same test items for the second time, they were to correct them, if, in their opinion, they were not formulated according to normal English usage. Five correct sentences, spaced through each section of the test, were inserted for control, and testify to the reliability of the informants. Four of the deviant utterances were repeated towards the end of the test to check consistency in informant judgement. In the Interpretation Test the figures for the paired test items are almost identical, while in the Operation Test there is fairly good agreement between the figures.

The version spoken by the Swedish school children was administered at Bournemouth in June and October, 1971. The result was similar on the two occasions and therefore conflated.

Quirk-Svartvik (1966) have the following to say about informant testing: "Since we assume throughout that acceptability is indirectly measurable by the degree of success in operation performance, we should expect a general correlation between the results of the Operation and Judgement Test" (p 35). In my informant test such a general correlation was expected between the Relevant Non-Compliance column and the Correction column in the Operation and Interpretation tests respectively. In other words, if the informants performed the operation and at the same time corrected the utterance in the Operation Test, they should then also correct the sentence in the Interpretation Test. A rank correlation calculated for the Bournemouth Relevant Non-Compliance and Correction columns amounted to .77, which reveals considerable agreement between the informants' usage and preference, that is, in both sections the informants considered most of the test items unacceptable.

The result of the Interpretation Test shows that the informants inte preted correctly about 75 per cent of the deviant utterances. This is a discovery of great interest.

The test version where I spoke the test items was relayed at Derby in October, 1971. The result diverged widely from the Bournemouth findings. As the informants could in this version hear the test items distinctly, and as there were no disturbing background noises in this version, they followed the instructions to the letter in many cases, that is, they performed the operation without changing the utterance in other respects. That the improved auditory conditions have a share in the result is confirmed by the Interpretation Test, where comprehension of the deviant utterances reached 90 per cent.

As the test conditions as well as the results differ for the Bournemouth and Derby experiments, they are accounted for separately in this study.

The findings of this study of intelligibility is that natives evidently understand non-native deviant utterances fairly well, This means that the kind of foreign language instruction which cannot aim at perfection, does not, however, lead to breakdown in communication.

The hierarchical scale of deviances upon which the classification of errors was based, hypothesized that syntactic deviances would be more easily interpreted by natives than semantic deviances. The success scores in the Informant Test for the twelve most common categories of deviance led to slight changes of the hypothesis. The hypothesis was confirmed in so far as syntactic deviances were found to be easily understood. It did not seem to matter if there were one or two syntactic deviances or if the deviance occurred in the auxiliary or in the main verb, something which was contrary to the hypothesis.

Semantic deviances were in the original scale of deviances (p 9) divided into three groups consisting of

(1) a word lexically deviant

(2) a semantically deviant utterance

(3) a semantically and syntactically deviant utterance.

Of these three groups, (2) was found to be most difficult to understand. Group (3) could sometimes contain a syntactic deviance which seemed to unravel the informational content of the utterance. This syntactic deviance could make the sentence as easily interpretable as (1) or even as utterances with syntactic deviances only.

Discussion and Implications

My error analysis has highlighted interesting aspects of errors in language learning. The corpus on which it builds is restricted in scope, but where similar research work has arrived at the same results, conclusions are justifiable.

The fact that the learners' errors follow a highly systematic pattern (whether it be the case of my Swedish pupils, or of Czech, English, French, or German students) is evidence of a distinct and analogous contribution to the learning procedure made by the learners.

According to contrastive analysis, learner difficulties are mainly made up of differences in the source and target languages. This was not borne out by my study or by those discussed in"Review of Related Work". It is thus questionable to select language learning materials solely from the viewpoint of the contrastive analysis theory.

Parallels were found to exist in first and second language acquisition. To these belong the facilitating effects of observable patterns in the language to be learnt, demonstrated e.g. in the past form of the regular verbs. As the small child as well as school children do not hear in the adult models a regular inflection of the irregular verbs, the question arises what role imitation and practice play in learning a language. The tenets of the audiolingual method are that in foreign language instruction they are of fundamental significance (Lado, 1964, p 55). These tenets have been challenged in teaching experiments by, for instance, Jarvis and Hatfield (1971, pp 401-410) and Oller and Obrecht (1968, pp 165-174 and 1969, 117-123). Their experiments revealed that drills which consisted of communicative activities were more effective than drills which in Nelson Brooks' words: "make no pretense of being communication" (1964, p 146), Thus evidence suggests that imitation and carefully graded pattern drills are not the most effective way of teaching a language.

Communication in realistic or in faked real-life situations was mentioned earlier as an effective teaching device. Errors, however, are bound to be more numerous in such activities than in the drilling of patterns. How should the teacher behave to promote the student's final mastery of the language? Too much correction can, as is a well-known fact, silence the learner. No correction at all might lead to sloppy habits in the second language. Holley and King take a middle stand in the question of correcting errors or not in "Imitation and Correction in Foreign Language Learning" (1971, pp 494-498). They contend that "stringent demands for grammatical accuracy are not only unrealistic but possibly harmful in learning a second language" (p 498). The teacher should instead seize upon and commend the "factual accuracy" in the student's response. They also think that "normal corrective procedures confuse the student. He fails to perceive the distinction between the accuracy of communication and the inaccuracy of grammar production" (p 497). In the author's opinion "corrective procedures" should only be resorted to when a group of students make the same error, and are at a stage where they can profit by explanations. Students should never be individually corrected.

It seems that there are reasons for a balanced view on the danger of errors. Small children undisputably learn to speak in spite of listening to their parents' incomplete, interrupted, and often incoherent utterances. It is also undeniable, that speakers of a foreign language can make themselves understood in spite of many syntactic errors.

This study makes no claim to having solved the problem of either the genesis or the treatment of errors. It has been undertaken because experimentation represents "the only available route to cumulative progress" (Campbell and Stanley, pp 171-246).

Future Research

The written criterion, of which the oral criterion is a replica of a kind, was in the GUME 5 experiment given to 24 class 8's as a pre- and post-test. Future research will classify the pupils' responses according to the principles used for the oral criterion. This prospective analysis will be able to pinpoint possible differences in performance before and after the experimental instruction. Informant

experiments will establish the intelligibility of the most frequent deviances. The taxonomy of deviances within the syntactic and semantic groups, hypothesized for this study and on the whole confirmed, will again be tested.

Future research will also deal with the question of what effect different teaching strategies have in the treatment of errors. Frequent errors will be singled out and exposed to different treatments in the classroom. These could entail emphatic correction of the sentences with or without making the student repeat the correct sentence, a concentration on the content of the response while replacing in passing incorrect grammatical elements by correct ones, and, finally, the modelling of new structures as a follow-up of the student's response.

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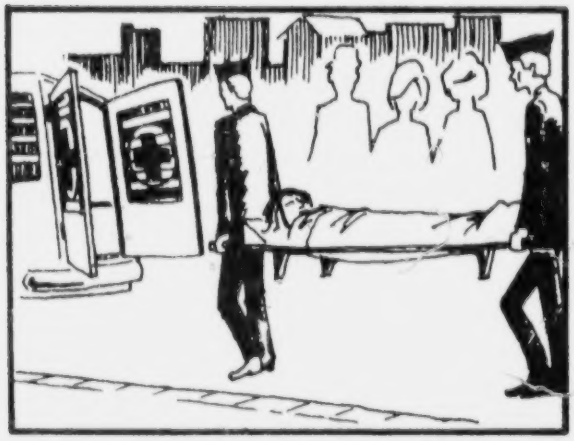
Appendix A

THE ORAL CRITERION

Ö V N I N G S E X E M P E L

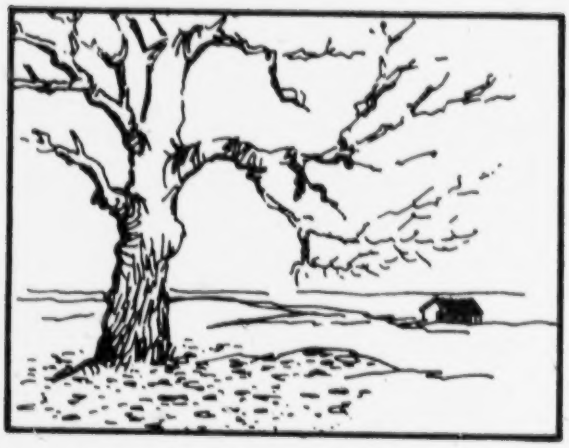


What happened to the lady?

She _____ _____ to the ambulance.

(Använd verbet "carry" i ditt svar.)

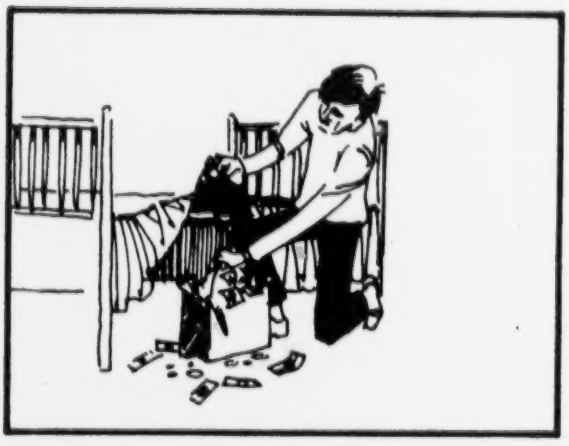
Picture 1.



What happened during the autumn storms?

The ground _____ _____ by leaves.
(Använd verbet "cover" i ditt svar.)

Picture 2.



What happened to the money?

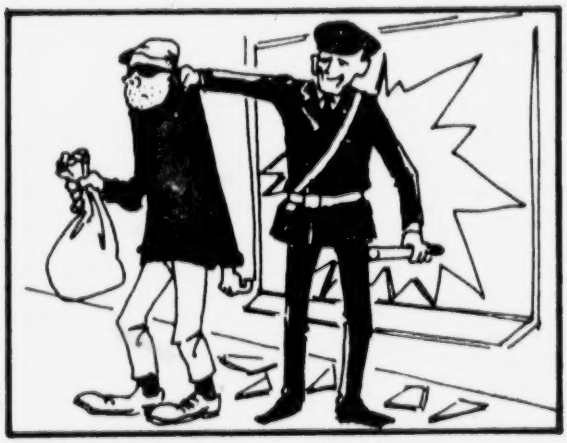
It _____ _____ under the bed.
(Använd verbet "hide" i ditt svar.)

Picture 3.

What happened to the boy?

He _____ _____ to work more by his teacher.
(Använd verbet "tell" i ditt svar.)

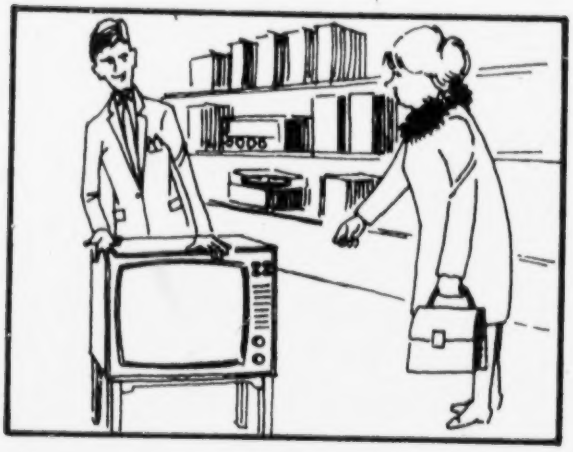
Picture 4.



What happened to the thief?

He _____ _____ by the policeman.
(Använd verbet "catch" i ditt svar.)

Picture 5.



What happened to the TV?

It _____ _____ by the lady.

(Använd verbet "buy" i ditt svar.)

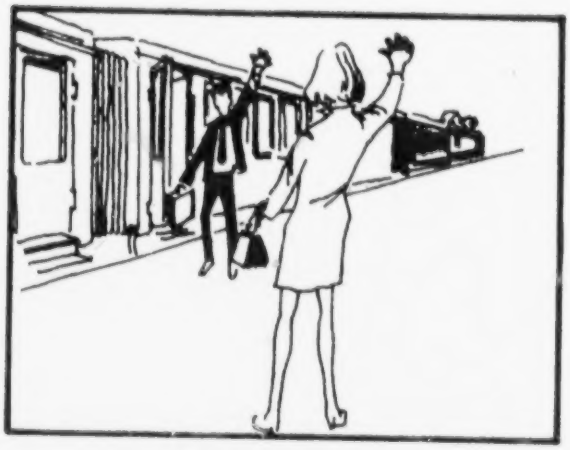
Picture 6.

What happened to the girl?

She _____ _____ to a party.

(Använd verbet "invite" i ditt svar.)

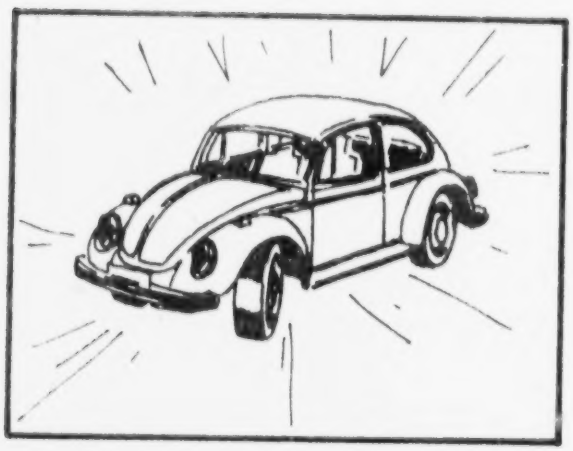
Picture 7.



What happened at the station?

The man _____ _____ by his sweetheart.
(Använd verbet "meet" i ditt svar.)

Picture 8.



What happened to the car?

It _____ _____ and looked like new.
(Använd verbet "wash" i ditt svar.)

Picture 9.

What happened to the boy?

He _____ _____ by the angry dog.

(Använd verbet "bite" i ditt svar.)

Appendix B

CLASSIFICATION MODEL FOR THE PUPILS' ERRORS

Classification Model for the Pupils' Errors

I. Correct Formation of the Passive Voice

II. Be + a past participle but with inaccuracies in the construction

A. Incorrect auxiliary (abbr. ia)

(a) number
(b) tense
(c) non-finite forms

Correct main verb (abbr. cv)

B. Correct auxiliary (abbr. ca)

Incorrect main verb (abbr. iv)

(a) regular inflection of irregular verbs ['bi:təd] , [bait] (for bought)

(b) irregular inflection of regular verbs ['krauən] .

(c) remainder ['haidən] , ['baitən], ['bidən] , semantically wrong verbs
Ex: [grəud] , hit, ['haiən] , ['bi:tən] , ['wentid] , [mi:tən], in'wentid, ['hidər] , clean, [bi:t] , [bət] , [bəut] , mit, intended, [ə'vaitid] , [in'plait] , [inte'veit], ['haidər] , ['metər] , [tʌtʃ t], [heid] , ['kɔ:tid] , [tə:t] .

II. cont.

C. Incorrect auxiliary (ia)

(a) number
(b) tense
(c) number and tense
(d) non-finite forms

Incorrect main verb (iv)

(a) regular inflection of irregular verbs
(b) irregular inflection of regular verbs
(c) past participle + s
(d) remainder (also semantically wrong verbs)
See iv under B

D. Auxiliary (abbr. a)

(a) was
(b) is
(c) were
(d) non-finite forms (was been)
(e) are
(f) has been

Incorrect main verb (iv)

(a) infinitive ['intwait], ['hidə], [kɔ:r], ['baiti], ['wʌts], [in'vit], ['intwi].
(b) infinitive + s
(c) past tense of irregular verbs
(d) past tense + s (hits)

III. Non-passive formations

A. Correct but non-passive formations

(a) present tense (-s in 3 pers. sing.)
(b) past tense
(c) has + past participle
(d) had + past participle
(e) was + ing-form, was ['bi:tiŋ]
(f) is + ing-form
(g) future tense
(h) has been + ing-form

B. Incorrect non-passive formations

B 1. Formations with an auxiliary + a main verb

Auxiliary	Main verb
aA	vA
(a) has	(a) infinitive
(b) had	(b) incorrect past participle ['ket|t], semantically wrong verbs
(c) have	

---

aB	vB
(a) be, been	(a) ing-form
(b) were, are	(b) semantically wrong ing-forms
(c) have, had	

---

aC	vC
have	correct past participle-form

---

aD	vD
will	incorrect form (tu:l)

B 2. Verb formations consisting of a main verb only

(a) infinitive [in'weit]

(b) past participle-form or past tense + s

(c) remainder (write, they hide), ['invətait], ['intet], [bit baid], [bit buy], [bi:t], [ha:d], [tɔ:l], [kætʃt].

B 3. Verbal formations consisting of an auxiliary only

Be (abbr. b)

(a) was

(b) incorrect number

(c) incorrect tense

(d) non-finite forms

Have (abbr. h)

(a) has

(b) had

III. C. Omission of the verbal part

Appendix C

DISTRIBUTION OF CORRECT RESPONSES, DEVIANCES AND OMISSIONS IN AK AND SK

Distribution of Errors, Ak, N = 101 (per cent)

		cover	invite	wash	hide	tell	catch	buy	meet	bite	Total x
I		42.6	22.8	32.7	1.0	17.8	5.0	14.9	8.9	10.9	17.4
IIA	ia cv (a)			1.0						1.0	0.2
	(b)	5.9	2.0	5.9	1.0	1.0		1.0	3.0		2.2
	(c)	1.0	2.0	8.9				3.0	1.0		1.8
IIB	ca iv (a)				8.9	30.7	20.8	24.8	11.9	8.9	11.8
	(b)	1.0									0.1
	(c)	1.0	5.8	1.0	8.9		2.0	1.0	3.0	6.9	3.2
IIC	ia iv (aa)					1.0					0.1
	(ba)					4.0	1.0	5.0		1.0	1.2
	(da)							2.0		1.0	0.3
	(ad)				1.0			1.0			0.2
	(bd)		1.0				1.0			2.0	0.4
	(dd)									4.0	0.4
	(dc)									1.0	0.1
	(cd)	1.0									0.1
IID	a iv (aa)	14.9	30.7	8.9	34.7	5.0	35.6	10.9	23.8	23.8	20.9
	(ba)	2.0	5.9	6.9	6.9		5.0	4.0	4.0	4.0	4.3
	(da)		1.0	2.0	1.0		6.9	1.0	1.0	5.0	2.0
	(ac)				4.0						0.4
	(ea)	1.0									0.1
	(fa)		1.0								0.1
	(ab)	1.0					1.0	1.0			0.3
	(dc)				1.0						0.1

Cont. Distribution of Errors, Ak

	cover	invite	wash	hide	tell	catch	buy	meet	bite	Total[x]
IIIA (a)				2.0	2.0		1.0		1.0	0.7
(b)		1.0						1.0		0.2
(c)	1.0			1.0						0.2
(d)			1.0							0.1
(e)			3.0	4.0	1.0	1.0	7.9	7.9	4.0	3.2
(f)		1.0	2.0						1.0	0.4
(g)							1.0			0.1
(h)			1.0		1.0			1.0	1.0	0.4
B1 aA III vA (aa)		1.0		1.0		2.0		1.0		0.6
(ba)	2.0			1.0		2.0			1.0	0.7
(ab)				1.0						0.1
(bb)	1.0	1.0		0.1						0.3
(ca)				1.0	1.0					0.2
B1 aB III vB (aa)			1.0	1.0		1.0	1.0	1.0	1.0	0.7
(ba)								1.0	1.0	0.2
(ca)							1.0	1.0		0.2
B1 aC vC			1.0					1.0	1.0	0.3
III B2 (a)	4.0	1.0	4.0	1.0	6.9	6.9	3.0	12.9	4.0	4.8
(b)								1.0		0.1
(c)		3.0		2.0	1.0	2.0	2.0		1.0	1.2

Cont. Distribution of Errors, Ak

	cover	invite	wash	hide	tell	catch	buy	meet	bite	Total[X]
III B3 b (a)			4.0	2.0	3.0			1.0		1.1
(b)										
(c)								1.0		0.1
(d)					1.0	1.0	1.0			0.3
III B3 h (a)										
(b)				1.0						0.1
C	20.8	20.8	15.8	12.9	23.8	5.9	12.9	12.9	14.9	15.6

[X]The sum under the heading "Total" on the right of the columns indicates that in Ak the nine preceding figures form this percentage of the total number of classified sentences, that is, 909.

Distribution of Errors, Sk, N = 139 (per cent)

	cover	invite	wash	hide	tell	catch	buy	meet	bite	Total[x]
I	78.4	77.0	80.6	34.5	73.4	56.8	78.4	68.3	43.2	65.6
IIA ia cv (a)	2.2	2.9	3.6	0.7	3.6			0.7		1.5
(b)	9.4	7.2	7.2	2.2	4.3	4.3	5.0	3.6	4.3	5.3
(c)	1.4	1.4	0.7	1.4	1.4	1.4	2.9		0.7	1.3
IIB ca iv (a)				12.9	5.8	17.3	4.3	5.8	12.2	6.5
(b)										
(c)		2.9		6.5		2.2		3.6	17.3	3.6
IIC ia iv (aa)				1.4		2.2			1.4	0.6
(ba)				1.4		0.7		0.7		0.3
(da)						2.2				0.2
(ad)				0.7					1.4	0.2
(bd)								0.7	1.4	0.2
(cd)				0.7						0.1
IID a iv (aa)	2.2	2.2	0.7	11.5		6.5	0.7	4.3	8.6	4.1
(ba)	0.7			4.3		1.4		1.4	0.7	1.0
(da)		0.7							0.7	0.2
(ca)						0.7	0.7	1.4		0.3
(ac)				7.2						0.8
(bc)				2.2						0.2
(ab)	0.7									0.1
(db)				0.7						0.1
(cd)				0.7						0.1

Cont. Distribution of Errors, Sk

		cover	invite	wash	hide	tell	catch	buy	meet	bite	Total
IIIA	(a)				0.7	1.4		0.7	0.7	0.7	0.5
	(b)	1.4		1.4		0.7			1.4		0.6
	(c)	1.4		0.7							0.2
	(d)			0.7				0.7			0.2
	(e)		0.7		2.2	2.2			1.4		0.7
	(f)				1.4	1.4	0.7	0.7	1.4		0.6
	(g)					0.7		0.7	0.7		0.2
III	B1 aA vA (aa)			0.7						0.7	0.2
	(ba)		0.7						0.7	0.7	0.2
	(ab)					0.7	0.7				0.2
	(cb)							0.7			0.1
III	B1 aB vB (aa)			0.7						0.7	0.2
	(ba)						0.7				0.1
	aC vC										
	B1 aD vD					0.7					0.1
III B2	(a)		0.7	0.7		0.7	0.7	0.7	0.7		0.5
	(b)										
	(c)						0.7	0.7			0.2

Cont. Distribution of Errors, Sk.

	cover	invite	wash	hide	tell	catch	buy	meet	bite	Total[X]
III B3 b(a)		0.7			0.7		1.4			0.3
(b)								0.7		0.1
(c)	0.7		0.7						0.7	0.2
III B3 h(a)					0.7					0.1
(b)										
C	1.4	2.9	1.4	6.5	1.4	0.7	1.4	1.4	4.3	2.4

[X]The sum under the heading "Total" on the right of the columns indicates that in Sk the nine preceding figures form this percentage of the total number of classified sentences, that is, 1.251.

Appendix D

MANUSCRIPT OF THE INFORMANT TEST

Manuscript of the Informant Test

C1	1.	She		He was ['baitid] by the angry dog.
			sk	(Bredinge - Acke Dahlman) x
H1	2.	Question		He was catch by the policeman.
			ak	(Hult - Rigmor Bjurefjäll)
A1	3.	Negation		He were told to work more by his teacher.
			sk	(Zachrisson - Angela Månhammar)
L1	4.	The car		It wash and look like new.
			ak	(Svensson - Silja Karlsson)
K1	5.	She		He was biting by the angry dog.
			ak	(Hult - Pia Pantzar)
non-deviant	6.	Question		The book was written in the 18th century.
				(spoken by M. Olsson)
B1	7.	The suit		It been washed and looked like new.
			ak	(Hult - Jan-Gunnar Karlsson)
C2	8.	Negation		He was ['kæ t{id}] by the policeman.
			sk	(Bredinge - Jette Larsson)
D1	9.	The money		It was ['haidən] under the bed.
			ak	(Ernered - Lars Wistrand)
K2	10.	Question		The man was meeting by his sweetheart.
			ak	(Hult - Pia Pantzar)
G1	11.	They		He be beat by the angry dog.
			ak	(Hult - Ann-Marie Johansson)
H2	12.	Negation		The ground was cover by leaves.
			ak	(Hult - Eva Lundin)
C3	13.	The TV		It was buyed by the lady.
			ak	(Hult - Inga-Lill Brolin)
I1	14.	The book		It was hid under the bed.
			sk	(Zachrisson - Ann-Charlotte Haav)
L2	15.	She		He tell to work more by his teacher.
			ak	(Persson - Desirée Dahlgren)

J1	16.	The murderer		He been catch by the policeman.
			ak	(Gisslin - Lennart Johansson)
D2	17.	Negation		The man was mit by his sweetheart.
			sk	(Zachrisson - Sven-Arne Svensson)
H3	18.	Question		He was bite by the angry dog.
			sk	(Friberg - Kerstin Borgström)
A2	19.	Negation		She were invited to a party.
			sk	(Falkenland - Ann-Charlotte Alfredsson)
B2	20.	They		It been bought by the lady.
			sk	(Friberg - Michael Claesson)
C4	21.	Question		The man was [ˈmi:tid] by his sweetheart.
			ak	(Ernered - Britt-Marie Karlsson)
K3	22.	Negation		It was buying by the lady.
			ak	(Hult - Kent Lindberg)
L3	23.	He		The thief catch by the policeman.
			ak	(Karlsson - Berit Samuelsson)
non-deviant	24.	The children		The child is playing in the garden.
				(spoken by M. Olsson)
H4	25.	The treasure		It was hide under the bed.
			ak	(Hult - Leif Karlsson)
D3	26.	Question		He was [ˈkɔ:tid] by the policeman.
			sk	(Zachrisson - Peter Åberg)
J2	27.	She		He been bite by the angry dog.
			ak	(Karlsson - Claes-Göran Eliasson)
non-deviant	28.	Negation		Perhaps he saw the bomb in time.
				(spoken by M. Olsson)
L4	29.	It		The money hide under the bed.
			ak	(Karlsson - Birgit Gustafsson)
A3	30.	The frock		It were washed and looked like new.
			sk	(Bredinge - Gerd Persson)
C5	31.	Question		He was teld to work more by his teacher.
			ak	(Hult - Rigmor Bjurefjäll)
D4	32.	She		She was [ˈbaitən] by the angry dog.
			sk	(Bredinge - Lennart Krantz)

E1	33.	Negation		He were ['kæʧid] by the policeman.
			sk	(Bredinge - Gerd Persson)
K4	34.	They		He is telling to work more by his teacher.
			sk	(Dahllöf - Claes Langfält)
non-deviant	35.	Question		The girl cleaned the car yesterday. (spoken by M. Olsson)
H5	36.	He		The man was meet by his sweetheart.
			sk	(Friberg - Christer Feldmannis)
C6	37.	Question		It was ['haidid] under the bed.
			sk	(Bredinge - Dag Simonsson)
L5	38.	He		The man meet his sweetheart.
			ak	(Karlsson - Håkan Skattberg)
F1	39.	The thief		He been ['kætʧ] by the policeman.
			sk	(Bredinge - Thomas Edberg)
L2	40.	She		He tell to work more by his teacher. (Repetition of No. 15)
			ak	(Persson - Desirée Dahlgren)
H6	41.	Negation		She was invite to a party.
			ak	(Hult - Rigmor Bjurefjäll)
non-deviant	42.	Question		The marriage took place on the first of May. (spoken by M. Olsson)
K1	43.	She		He was biting by the angry dog. (Repetition of No. 5)
			ak	(Hult - Pia Pantzar)
H1	44.	Question		He was catch by the policeman. (Repetition of No. 2)
			ak	(Hult - Rigmor Bjurefjäll)
A1	45.	Negation		He were told to work more by his teacher. (Repetition of No. 3)
			ak	(Zachrisson - Angela Månhammar)

[x] The teacher's and the pupil's names have been printed under each test item

Appendix E

INSTRUCTIONS FOR THE INFORMANTS

Instruction 1

Hello everybody! My name is Roy Fox, and I am now going to explain what you are to do. On the desk in front of you there are some sheets of paper with the heading "Transformations of English sentences". Under this heading you find the words "age" and "sex". Put a cross in the right place concerning your own age and sex. Don't write your name. (Twenty seconds.) Now look at the sentence below: "County where I spent the greater part of my first fifteen years." Fill in that, too. (Twenty seconds.)

You are now going to listen to English sentences as spoken by Swedish school children. First, however, put up your hand if you can't hear me well where you are sitting, and we will adjust the tape-recorder and take the last sentences once more. (Ten seconds.) If you can all catch what I am saying, we will go on now.

The sentences you are going to hear should be changed in some specified way. If, for instance, you hear the word "Negation" and after that the sentence "He often comes here", you are expected to write down the sentence: "He does not often come here". If the word "They" is heard and then the sentence: "He plays tennis in the afternoon", you should write down the sentence "They play tennis in the afternoon". Similarly, if you hear the word "Question", and after that the sentence "The words were speak with great authority" you should take down the sentence: "Were the words speak with great authority". If you hear the words "the typist" and following them the sentence "She had a very pretty face", you are supposed to write down: "The typist had a very pretty face".

You will now be given three more practice sentences. Go to the next page. There you can see the practice sentences written down. This time you should write your response under the printed version of the sentence in question.

Listen now:

I (Three seconds) He is longing for her. (Fifteen seconds)

The correct response should be: "I am longing for her"

She (Three seconds) He doesn't go to school. (Fifteen seconds)

The correct response should be: She doesn't go to school.

Question (Three seconds) He loves her (Fifteen seconds)

The correct response should be: Does he love her?

When you hear sentences out of context they often sound strange. I want to stress, however, that you should only make the changes you are instructed to make. If you haven't finished writing when the next sentence is read out, just leave the unfinished sentence and go on listening to the new one. If you can't hear what is said, or if you can't make out at all what the sentence is about, don't write anything. When we start in earnest now, you will only hear the sentence. Write the answers starting at number one. Skip a line if you can't decide what to write, and once again, only make the changes you are requested to make and don't write the words "negation", "question", "she" and so on in front of your responses.

Here we go then.

Instruction 2

That was the end of the first part of the test. Now go on to the next page. Before you start again, here's some music for you to listen to.

Now back to work. When you listened to the sentences spoken by the Swedish school children just now, I am sure you noticed that not all of them were correct according to normal English usage. You are now going to hear the same sentences again, but this time you should write what the correct version of them should be, if you think that something in them should be changed. Please notice that if you don't get at all what the sentence is about, don't write anything at all. Now listen and write.

Phrase at the end

That was all for today. Close your papers now. Thank you very much for your cooperation.

Appendix F

GENERAL SCORE TABLE

The Bournemouth 1 Experiment

The Bournemouth I Experiment N = 31

Item No.	Task	Test sentence	Operation test C.	Operation test RNC.	Operation test O.	Operation test O.V.	Interpretation test C.	Interpretation test Cor.	Interpretation test O.	Interpretation test O.V.
A1	Negation	He were told to work more by his teacher		8	22	1		21	9	1
(A1)	Negation	He were told to work more by his teacher		11	17	3		23	8	
A2	Negation	She were invited to a party		2	19	10		6	14	11
A3	The frock	It were washed and looked like new	2	21	5	3		29	2	
B1	The suit	It been washed and looked like new		15	13	3		28	3	
B2	They	It been bought by the lady		12	17	2		15	16	
C1	She	He was ['baitid] by the angry dog			15	16		7	7	17
C2	Negation	He was ['kæt ʃ id] by the policeman		20	10	1		29	1	1
C3	The TV	It was buyed by the lady		17	14			21	9	1
C4	Question	The man was ['mi:tid] by his sweetheart		18	9	4		26	2	3
C5	Question	He was told to work more by his teacher		14	12	5		18	10	3
C6	Question	It was ['haidid] under the bed	1	23	3	4		26	1	4
D1	The money	It was ['haidən] under the bed		24	6	1		29	1	1
D2	Negation	The man was [illegible] by his sweetheart		1	18	12		20	10	1
D3	Question	He was ['kɔ:tid] by the policeman		22	9			27	3	1
D4	She	He was ['baitən] by the angry dog		15	3	13		16	3	12
E1	Negation	He were ['kæt ʃ id] by the policeman		23	4	4		27	2	2
F1	The thief	He been ['kæt ʃ t] by the policeman		24	6	1		30	1	
G1	They	He be beat by the angry dog		18	13			23	8	
H1	Question	He was catch by the policeman		11	15	5		30	1	
(H1)	Question	He was catch by the policeman		28	2	1		31		
H2	Negation	The ground was cover by leaves		15	15	1		22	9	
H3	Question	He was bite by the angry dog	1	13	7	5		26	3	2
H4	The treasure	It was hide under the bed	3	20	6	2		26	5	
H5	He	The man was meet by his sweetheart	5	16	7	3	1	25	1	4
H5	Negation	She was invite to a party		15	15	1		23	8	

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			Operation test				Interpretation test			
			C.	RNC.	O.	O.V.	C.	Cor.	O.	O.V.
I1	The book	It was hid under the bed		21	10			27	4	
J1	The murderer	He been catch by the policeman		27	2	2		31		
J2	She	He been bite by the angry dog		23	5	3		25	5	1
K1	She	He was biting by the angry dog		5	2	24		8	2	21
(K1)	She	He was biting by the angry dog		5	3	23		5	2	24
K2	Question	The man was meeting by his sweetheart		5	18	8		25	2	4
K3	Negation	It was buying by the lady		14	17			19	10	2
K4	They	He is telling to work more by his teacher		11	20			17	14	
L1	The car	It wash and look like new		8	22	1		22	5	4
L2	She	He tell to work more by his teacher		6	25			20	11	
(L2)	She	He tell to work more by his teacher		13	16	2		19	12	
L3	He	The thief catch by the policeman		18	13			16	15	
L4	It	The money hide under the rug	1	11	13	6		11	11	9
L5	He	The man meet his sweetheart	2	10	19			2	13	16
6	Question	The book was written in the 18th century	25		2	4	27		2	2
24	The children	The child is playing in the garden	19		3	9	26			5
28	Negation	Perhaps he saw the bomb in time	9		10	12	25		2	4
35	Question	The girl cleaned the car yesterday	23		7	1	28		2	1
42	Question	The marriage took place on the first of May	23		3	5	22		1	8

Appendix G

GENERAL SCORE TABLE

The Bournemouth 2 Experiment

The Bournemouth 2 Experiment N = 38

Cat	Task	Test sentence	Operation test				Interpretation test			
			C.	RIC	O.	O.V.	C.	Cor.	O.	O.V.
A1	Negation	He were told to work more by his teacher		3	33	2		32	2	4
(A1)	Negation	He were told to work more by his teacher		28	5	5		35	2	1
A2	Negation	She were invited to a party		1	30	7		12	22	4
A3	The frock	It were washed and looked like new	1	31	3	3		38		
B1	The suit	It been washed and looked like new		26	11	1		36	2	
B2	They	It been bought by the lady		14	22	2		29	9	
C1	She	He was ['baitid] by the angry dog		8	21	9		21	1	16
C2	Negation	He was ['kætʃid] by the policeman		31	3	4		36	2	
C3	The TV	It was buyed by the lady	1	17	16	4		33	4	1
C4	Question	The man was ['mi:tid] by his sweetheart	1	21	7	9	1	30	3	4
C5	Question	He was told to work more by his teacher		32	5	1		35	3	
C6	Question	It was ['haidid] under the bed	1	31		6		32	1	5
D1	The money	It was ['haidən] under the bed	3	24	4	7	1	32	1	4
D2	Negation	The man was mit by his sweetheart		21	8	9		28	8	2
D3	Question	He was ['kɔ:tid] by the policeman	1	35	1	1		37	1	
D4	She	He was ['kaitən] by the angry dog		23	3	12		25	3	10
E1	Negation	He were ['kætʃid] by the policeman		31	3	4		35	2	
F1	The thief	He been ['kætʃt] by the policeman		34	3	1		32	2	4
G1	They	He be beat by the angry dog		21	17			33	5	
H1	Question	He was catch by the policeman		33	3	2		37		1
(H1)	Question	He was catch by the policeman		37	1		1	37		
H2	Negation	The ground was cover by leaves		24	13	1	1	33	4	
H3	Question	He was bite by the angry dog		35	2	1	1	35	1	1
J1	The treasure	It was hide under the bed	2	33	2	1		32	2	4
M5	He	The man was meet by his sweetheart	2	31	2	3	1	33	2	2
N1	Negation	She was invite to a party		19	16	3		26	9	3

			Operation test				Interpretation test			
			C.	RNC	O.	O.V.	C.	Cor.	O.	O.V.
I1	The book	It was hid under the bed	4	24	2	8	3	31	1	3
J1	The murderer	He been catch by the policeman		35		3		36		2
J2	She	He been bite by the angry dog	1	31	4	2		35	2	1
K1	She	He was biting by the angry dog		12	4	22		17	1	20
(K1)	She	He was biting by the angry dog		16		22		19	1	18
K2	Question	The man was meeting by his sweetheart	2	15	9	12		33	1	4
K3	Negation	It was buying by the lady	1	26	9	2		34	4	
K4	They	He is telling to work more by his teacher		19	16	3		28	7	3
L1	The car	It wash and look like new		16	13	9		32		6
L2	She	He tell to work more by his teacher		9	26	3		30	6	2
(L2)	She	He tell to work more by his teacher		30	6	2		32	3	3
L3	He	The thief catch by the policeman		25	10	3		31	5	2
L4	It	The money hide under the bed		26	7	5		17	6	15
L5	He	The man meet his sweetheart	1	4	17	16	1	11	10	16
6	Question	The book was written in the 18th century	34		3	1	34		3	1
24	The children	The child is playing in the garden	28		2	8	31		2	5
28	Negation	Perhaps he saw the bomb in time	16		6	16	31		3	4
35	Question	The girl cleaned the car yesterday	35			3	37		1	
42	Question	The marriage took place on the first of May	33		1	4	31		1	6

Appendix H

GENERAL SCORE TABLE

The Conflated Bournemouth 1 and 2 Experiments

The Conflated Bournemouth 1 & 2 experiments N = 60

	Task	Test sentence	Production test C	Cor.	O.	O.V.	Interpretation test C	Cor.	O.	O.V.
A1	Negation	He were told to work more by his teacher		41	55	2		53	11	5
(A1)	Negation	He were told to work more by his teacher		39	22	8		58	10	1
A2	Negation	She were invited to a party		3	49	17		18	36	15
A3	The frock	It were washed and looked like new	3	52	8	6		67	2	
B1	The suit	It been washed and looked like new		47	24	4		64	5	
B2	They	It been bought by the lady		46	39	4		44	25	
C1	She	He was ['haitid] by the angry dog		8	36	25		28	8	33
C2	Negation	He was [kæt∫id] by the policeman		51	13	5		65	3	1
C3	The TV	It was buyed by the lady	1	8	30	4		54	13	2
C4	Question	The man was 'mi:tid by his sweetheart	1	39	16	13	1	56	5	7
C5	Question	He was told to work more by his teacher		46	17	6		53	13	3
C6	Question	It was ['haidid] under the bed	2	54	3	10		58	2	9
D1	The money	It was ['haidən] under the bed	3	48	10	8	1	61	2	5
D2	Negation	The man was met by his sweetheart		22	26	21		48	18	3
D3	Question	He was [kæt∫t] by the policeman	1	57	10	1		64	4	1
D4	She	He was ['haitən] by the angry dog		38	6	25		41	6	22
D5	Negation	He was [kæt∫t] by the policeman		50	7	8		63	4	2
F1	The thief	He been [kæt∫t] by the policeman		58	9	2		52	3	4
G1	They	He be beat by the angry dog		39	30			56	13	
H1	Question	He was catch by the policeman		44	18	7		67	1	1
(H1)	Question	He was catch by the policeman		65	3	1	1	63		
H2	Negation	The ground was cover by leaves		39	20	2	1	55	13	
H3	Question	He was bite by the angry dog	1	53	9	6	1	61	4	3
H4	The treasure	It was hide under the bed	5	53	8	3		53	7	4
H5	He	The man was meet by his sweetheart	7	47	9	6	2	58	3	6
H6	Negation	She was invite to a party		34	31	4		49	17	3

			Generation test				Interpretation test			
			C	Cor.	O.	O.V.	C	Cor.	O.	O.V.
[illegible]	The book	It was hid under the bed	4	[illegible]	12	8	3	58	5	3
[illegible]	The murderer	He been catch by the policeman	[illegible]	[illegible]	[illegible]	5		67		2
[illegible]	She	He been bite by the angry dog	1	[illegible]	9	5		60	7	2
K3	She	He was biting by the angry dog		17	6	46		25	3	41
[illegible]	She	He was biting by the angry dog		[illegible]	3	45		24	3	42
[illegible]	Question	The man was meeting by his sweetheart	2	[illegible]	27	20		58	3	8
[illegible]	Negation	It was buying by the lady	1	[illegible]	26	2		53	14	2
K4	They	He is telling to work more by his teacher		30	36	3		45	21	3
L1	The car	It wash and look like new		24	35	10		54	5	10
[illegible]	She	He tell to work more by his teacher		[illegible]	51	3		50	17	2
(L2)	She	He tell to work more by his teacher		43	22	4		51	15	3
L3	He	The thief catch by the policeman		43	23	3		47	20	2
[illegible]	[illegible]	The money hide under the bed	1	[illegible]	20	11		[illegible]	[illegible]	24
L5	He	The man meet his sweetheart	3	14	36	16	1	13	23	32
[illegible]	Question	The book was written in the 18th century	59	[illegible]	[illegible]	5	61	[illegible]	5	3
24	The children	The child is playing in the garden	47		5	17	57		2	10
28	Negation	Perhaps he saw the bomb in time	25		16	28	56		5	8
35	Question	The girl cleaned the car yesterday	58		7	4	65		3	1
42	Question	The marriage took place on the first of May	56		4	9	53		2	14

Appendix I

GENERAL SCORE TABLE

The Derby Experiment

The Derby Experiment (N = 50)

Cat No.	Task	Test sentence	Operation test				Interpretation test			
			C	RNC	O	O.V.	C	Cor.	O	O.V.
A1	Negation	He were told to work more by his teacher	9	32	3	6	1	47	1	1
(A1)	Negation	He were told to work more by his teacher	17	28	1	4		50		
A2	Negation	She were invited to a party	26	23	1			48	1	1
A3	The frock	It were washed and looked like new	28	19	2	1	1	48	1	
B1	The suit	It been washed and looked like new	16	24	5	5	1	48	1	
B2	They	It been bought by the lady	18	19	7	6	1	49		
C1	She	He was ['baitid] by the angry dog	32	6		12		45		5
C2	Negation	He was [tʃid] by the policeman		17	2	31		50		
C3	The TV	It was buyed by the lady	23	11	10	6	1	48		1
C4	Question	The man was ['mi:tid] by his sweetheart	32	12	2	4	1	49		
C5	Question	He was teld to work more by his teacher	9	39	1	1	1	45	4	
C6	Question	It was ['haidid] under the bed	30	12	1	7	1	46		3
D1	The money	It was ['haidn] under the bed	5	16	5	24	1	45		4
D2	Negation	The man was bit by his sweetheart	2	34	1	13	2	45	2	1
D3	Question	He was ['bi:tid] by the policeman	35	13	1	1	1	48	1	
D4	He	She was ['baitn] by the angry dog	20	22	2	6	1	47		2
E1	Negation	He were ['tʃid] by the policeman	21	14	2	13		48		2
F1	The thief	He been [tʃid] by the policeman	28	11	2	9	1	48	1	
G1	They	He be beat by the angry dog	10	17	3	20	1	43	2	4
H1	Question	He was catch by the policeman	4	46				50		
(H1)	Question	He was catch by the policeman	5	44	1			50		
H2	Negation	The ground was cover by leaves	20	28	1	1	2	43	5	
H3	Question	He was bite by the angry dog	32	17	1		2	48		
H4	The treasure	It was hide under the bed	32	13	2	3	1	46		3
H5	He	The man was meet by his sweetheart	17	11	2	20	1	48		1
H6	Negation	She was invite to a party	25	15	3	7	1	48		1

			Production test				Interpretation test			
			C	for.	O.	O.V.	C	for.	O.	O.V.
[illegible]	The book	It was hid under the bed	37		1	1	5	45		
[illegible]	The murderer	He been catch by the policeman	4		2	25		47	1	2
[illegible]	She	He been bite by the angry dog	27	[illegible]	1	9	1	47		2
[illegible]	She	He was biting by the angry dog	24	[illegible]	1	2	1	49		
[illegible]	She	He was biting by the angry dog	17	[illegible]	1	1		47		3
[illegible]	Question	The man was meeting by his sweetheart	17	[illegible]	6	5		46		4
[illegible]	Negation	It was buying by the lady	14	[illegible]	3	2	1	47	1	1
[illegible]	They	He is telling to work more by his teacher	13	[illegible]	7	4	1	47	1	1
L1	The car	It wash and look like new	18	[illegible]	14	10	1	28	1	20
[illegible]	She	He tell to work more by his teacher	4	[illegible]	1	22	1	48	1	
[illegible]	She	He tell to work more by his teacher	2	17	2	29		48	1	1
L3	He	The thief catch by the policeman	6	[illegible]	4	14		46		4
L4	It	The body hide under the bed	28	[illegible]	4	7		[illegible]		5
L5	He	The man meet his sweetheart	29	[illegible]	3	17	1	5		44
[illegible]	Question	The [illegible]	43		2	5	45		4	1
24	The children	The child is playing in the garden	21		1	28	37		4	9
28	Negation	Perhaps he saw the bomb in time	41		4	5	39		10	1
35	Question	The girl cleaned the car yesterday	44		1	5	48		2	
42	Question	The marriage took place on the first of May	41		4	5	40		4	6

Appendix J

GENERAL SCORE TABLE

Raw Scores and Scores in Per Cent for the

Conflated Bournemouth Results in the RNC

and Correction Columns

N = 69

Cat No.	Task	Test sentence	Raw scores RNC	Raw scores Cor.	Per cent RNC	Per cent Cor.
A1	Negation	He were told to work more by his teacher.	11	53	16	77
(A1)	Negation	He were told to work more by his teacher.	39	58	57	84
A2	Negation	She were invited to a party.	3	18	4	26
A3	The frock	It were washed and looked like new.	52	67	75	97
B1	The suit	It been washed and looked like new.	41	64	59	93
B2	They	It been bought by the lady.	26	44	38	64
C1	She	He was ['baitid] by the angry dog.	8	28	12	41
C2	Negation	He was ['kæʧid] by the policeman.	51	65	74	94
C3	The TV	It was buyed by the lady.	34	54	49	78
C4	Question	The man was ['mi:tid] by his sweetheart.	39	56	57	81
C5	Question	He was teld to work more by his teacher.	46	53	67	77
C6	Question	It was ['haidid] under the bed.	54	58	78	84
D1	The money	It was ['haidən] under the bed.	48	61	70	88
D2	Negation	The man was mit by his sweetheart	22	48	32	70
D3	Question	He was ['kɔ:tid] by the policeman.	57	64	83	93
D4	She	He was ['baitən] by the angry dog.	38	41	55	59
E1	Negation	He were ['kæʧid] by the policeman.	54	63	78	91
F1	The thief	He been ['kæʧt] by the policeman.	58	62	84	90
G1	They	He be beat by the angry dog.	39	56	57	81
H1	Question	He was catch by the policeman.	44	67	64	97
(H1)	Question	He was catch by the policeman.	65	68	94	99
H2	Negation	The ground was cover by leaves.	39	55	57	80
H3	Question	He was bite by the angry dog.	53	61	77	88
H4	The treasure	It was hide under the bed.	53	58	77	84
H5	He	The man was meet by his sweetheart.	47	58	68	84
H6	Negation	She was invite to a party.	34	49	49	71

			Raw scores RNC	Cor.	Per cent RNC	Cor.
I1	The book	It was hid under the bed.	45	58	65	84
J1	The murderer	He been catch by the policeman.	62	67	90	97
J2	She	He been bite by the angry dog.	54	60	78	87
K1	She	He was biting by the angry dog.	17	25	25	36
(K1)	She	He was biting by the angry dog.	21	24	30	35
K2	Question	The man was meeting by his sweetheart.	20	58	29	84
K3	Negation	It was buying by the lady.	40	53	58	77
K4	They	He is telling to work more by his teacher.	30	45	43	65
L1	The car	It wash and look like new.	24	54	35	78
L2	She	He tell to work more by his teacher.	15	50	22	72
(L2)	She	He tell to work more by his teacher.	43	51	62	74
L3	He	The thief catch by the policeman.	43	47	62	68
L4	It	The money hide under the bed.	37	28	54	41
L5	He	The man meet his sweetheart.	14	13	20	19